



# Air Quality Action Plan Progress Report for Worcestershire April 2013 – April 2015

In fulfillment of Part IV of the  
Environment Act 1995  
Local Air Quality Management

October 2015

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# Executive Summary

The Air Quality Action Plan for Worcestershire was formally adopted by the various Worcestershire local authorities during the Autumn of 2013. Following formal adoption of the Action Plan all identified actions have been prioritised and four to five priority actions identified for each AQMA.

A Steering Group and relevant AQMA specific Sub-Groups have been set up and key stakeholders invited to participate. Whilst interest from stakeholders has been limited small Sub-Groups have been developed in the majority of cases and work to progress priority actions for each AQMA has taken place.

Engagement mechanisms with Worcestershire County Council have been significantly improved over this period. Successful engagement with Worcestershire County Council is key to solving poor air quality in all existing AQMAs as the key issues are intrinsically linked to traffic and transport which are predominantly County Council roles and responsibilities.

A number of key projects have been implemented or initiated in a number of the AQMAs, namely:

- The implementation of the Lowesmoor Air Pollution Control Zone and subsequent reductions in traffic travelling through the AQMA.
- Working towards the initiation of a major bid to the Low Emission Bus Scheme for the Worcester City area with the aim of transforming the existing bus fleet to ultra low emission vehicles.
- Development of a scheme for transport modelling and trial of junction re-configuration at Port Street, Evesham with the aim of reducing congestion and the number of vehicles held inside the AQMA.

- Exploration of the viability of a joint bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for the installation of a compressed natural gas filling facility and pipeline infrastructure in Worcestershire
- Junction remodelling and signal equipment improvements have been undertaken at the Hagley island junction (A456 and A491).

The work of the Steering Group and Sub-Groups will continue to progress the implementation of priority actions identified for each AQMA. Further details are provided within the main body of the report below.

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# **1 Introduction**

## **1.1 Purpose of Air Quality Action Plan Progress Report**

This report fulfils the requirements of the Local Air Quality Management (LAQM) process as set out in Part IV of the Environment Act (1995), the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 and the relevant Policy and Technical Guidance documents.

An Air Quality Action Plan Progress Report is required to be submitted to DEFRA by the end of April each year.

This Progress Report covers the period of 1<sup>st</sup> April 2013 to 30<sup>th</sup> April 2015.

## **1.2 Air Quality Objectives**

The air quality objectives applicable to LAQM in England are set out in the Air Quality (England) Regulations 2000 (SI 928), The Air Quality (England) (Amendment) Regulations 2002 (SI 3043), and are shown in Table 1.1. This table shows the objectives in units of microgrammes per cubic metre  $\mu\text{g}/\text{m}^3$  (milligrammes per cubic metre,  $\text{mg}/\text{m}^3$  for carbon monoxide) with the number of exceedences in each year that are permitted (where applicable).

**Table 1.1 Air Quality Objectives included in Regulations for the purpose of LAQM in England**

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 µg/m <sup>3</sup>	Running annual mean	31.12.2003
	5.00 µg/m <sup>3</sup>	Annual mean	31.12.2010
1,3-Butadiene	2.25 µg/m <sup>3</sup>	Running annual mean	31.12.2003
Carbon monoxide	10 mg/m <sup>3</sup>	Running 8-hour mean	31.12.2003
Lead	0.50 µg/m <sup>3</sup>	Annual mean	31.12.2004
	0.25 µg/m <sup>3</sup>	Annual mean	31.12.2008
Nitrogen dioxide	200 µg/m <sup>3</sup> not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m <sup>3</sup>	Annual mean	31.12.2005
Particulate Matter (PM <sub>10</sub> ) (gravimetric)	50 µg/m <sup>3</sup> , not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 µg/m <sup>3</sup>	Annual mean	31.12.2004
Sulphur dioxide	350 µg/m <sup>3</sup> , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m <sup>3</sup> , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m <sup>3</sup> , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005



## **1.3 Background**

Worcestershire Regulatory Services (WRS) was formed in June 2010 and is a shared service acting on behalf of Bromsgrove District Council, Malvern Hills District Council, Redditch Borough Council, Worcester City Council, Worcestershire County Council, Wychavon District Council and Wyre Forest District Council. The service was formed from the Environmental Health and Licensing departments of the six Worcestershire District Councils and the Trading Standards function of Worcestershire County Council. Responsibility for managing local air quality transferred from the partnership councils to WRS in April 2010.

In 2013 WRS produced a countywide Air Quality Action Plan for Worcestershire. The report fulfils the requirements of the local air quality management process and represents an Air Quality Action Plan for the ten air quality management areas (AQMAs) declared in Worcestershire.

## **2 Progress Made April 2013 – April 2015**

### **2.1 Consultation Period and Formal Adoption**

Following development of the Air Quality Action Plan for Worcestershire consultation of key stakeholders took place in May and June 2013. A number of responses were received from relevant organisations and local residents. All comments were reviewed and actioned as appropriate. A summary of consultee comments was produced and published on the WRS website. Copies of the summary documents produced for each local authority area are included as Appendix 1.

Following the consultation period and subsequent amendments to the report, in response to consultee comments, the Air Quality Action Plan for Worcestershire was formally adopted by the relevant local authorities on the following dates:

Bromsgrove District Council	-	2 <sup>nd</sup> October 2013
Malvern Hills District Council	-	29 <sup>th</sup> October 2013
Redditch Borough Council	-	15 <sup>th</sup> October 2013
Worcester City Council	-	13 <sup>th</sup> November 2013
Wychavon District Council	-	15 <sup>th</sup> October 2013
Wyre Forest District Council	-	24 <sup>th</sup> October 2013

### **2.2 Prioritisation of Actions**

The Action Plan for Worcestershire identified a large number of potential actions for each of the Worcestershire AQMAs. It was recognised that it was not feasible to progress all of the identified actions simultaneously. WRS therefore carried out a prioritisation procedure for each AQMA in order to identify “priority actions” to progress first. The process followed in order to achieve this is detailed below.

The “prioritisation matrix” was applied to all of the actions identified within the action plan. The aim of the matrix was to generate a numerical score and subsequent level

of priority for each action based upon which was likely to offer the most benefit, taking into account any associated contraindications, for example high cost. The categories on which the proposed actions were assessed were as follows:

- **Degree** – the likely contribution the action would provide in terms of reducing NOX and any subsequent improvement in local air quality – score range; 10 (high impact), 8, 6, 4, 2, 0 (no impact), and -1 (negative impact).
- **Financial Cost** – scored from low cost 4 (less than £5k), 3 (£5k-£25k), 2 (£25k-£100k), and 1 high cost (above £100k).
- **Socio-Political** – scored 3 for socio-political support, 2 for neutral, and 1 for opposition.
- **Ease** – feasibility for action to be implemented – 4 for no obstacle, 3 for feasible, 2 for unlikely and 1 for very unlikely.
- **Timescale** – duration to implement action – scored from short timeframe 4 (1-2 years), 3 (3-5 years), 2 (6-10 years) and 1 long timeframe (upwards of 10 years).
- **Confidence** – in accuracy/strength of information used in scoring actions High, Medium or Low.

The identified actions that achieved the highest score for each AQMA were highlighted as the “priority actions”, of which the top four or five were selected for further, more detailed, investigation. It was decided that if any of these prioritised actions were ruled out for any reason, the next highest scoring action would take its place.

After the prioritisation matrix process had been completed for all actions relating to each AQMA an internal critique of the general procedure was undertaken to identify any shortcomings and obvious anomalies and amendments made where necessary.

The weaknesses identified generally related to a lack of available information to quantify with any certainty, the impact the proposed actions would have.

Details of the prioritisation matrix used and the internal critique undertaken by WRS were provided to stakeholders prior to the first meeting of the Worcestershire Air Quality Steering Group and comments sought from those interested stakeholders. The comments received were supportive of the approach taken by WRS, however as previously identified, the lack of available information to quantify the likely impact of actions on local air quality was identified as the key weakness in the process.

A copy of the prioritisation matrix is provided as Appendix 2.

## 2.3 Quantifying Emission Reductions

Following adoption of the Air Quality Action Plan for Worcestershire, WRS began to try and quantify emission reductions for each of the actions identified within the Action Plan.

WRS began by using the Emissions Factor Toolkit (EFT) with the aim of quantifying the priority actions identified by the prioritisation matrix. However WRS were unsuccessful in producing reliable quantified emission reduction predictions for the following main reasons:

- **The large number of unknowns and variables relating to the priority actions.** For example, change of behaviour related actions such as flexible working, cycling and walking initiatives etc. It is very difficult to accurately estimate the uptake of such schemes, how any uptake will vary over time and therefore to meaningfully quantify what impact that will in turn have on emissions. Data relating to uptake of such schemes can be gleaned from other initiatives in the area, such as the Worcester City Choose How You Move Initiative, however there are significant social, cultural and demographic differences between Worcester City and the rest of Worcestershire, suggesting that any estimates of uptake may be inaccurate. Similar unknowns exist for the majority of the identified priority actions, for example, without

detailed junction modelling, which WRS is not capable of completing, it is not possible to determine what impact a junction re-configuration will have on levels of congestion and flow and therefore it is not possible to accurately quantify any emission reduction resulting from a junction re-configuration.

- **Time and resource implications.** Where there is data which could be used to quantify emission reductions there is a significant resource demand associated with obtaining, cleansing and manipulating such data, for example data relating to behaviour changes as a result of the Worcester City Choose How You Move Initiative. With ten AQMAs existing across the County and a number of emerging areas of poor air quality WRS felt that it would be more effective to focus resources on the implementation of identified priority actions rather than detailed quantification of emission reductions.
- **Lack of technical guidance for achieving quantification of emission reductions.** WRS found that, at the time, there was a lack of technical guidance available to local authorities with regard to achieving meaningful quantification of emission reductions.

In light of the above complications WRS decided to estimate emission reductions, rather than spend many months trying to produce quantified emission reductions. Emission reductions for both priority and non-priority actions were estimated based on the following:

- Local knowledge was found to be key in estimating emission reductions. An understanding of the key issues contributing to poor air quality within the AQMAs formed the basis of estimating likely emission reductions. For example Port Street, Evesham. Local knowledge informs us that one of the significant contributors to poor air quality within the AQMA is high levels of congestion as a result of traffic being held inside the AQMA by the existing junction arrangements at Waterside and Workman's Bridge. Based on this it is possible determine that reducing or removing congestion within the AQMA as a result of re-configuration of the junction will have a significant impact on emissions. The percentage emission reduction for this action was then calculated based on the above information and as a percentage of the total

emission reduction required to revoke the AQMA. In estimating emission reductions relating to specific vehicle categories, such as bus quality partnerships, available source apportionment data was used to further inform the estimate.

Whilst this approach does not result in fully quantified emission reduction, prediction does provide an efficient and reliable method for estimating emission reductions relevant to each action.

## **2.4 Engagement with Worcestershire County Council**

Following the adoption of the Air Quality Action Plan for Worcestershire a new formal representative responsible for air quality was appointed by Worcestershire County Council. This appointment has proved valuable and has had a positive impact on the success of liaison with Worcestershire County Council. WRS are now able to liaise with the larger County Council organisation regarding air quality related issues via the formal representative who has proved very effective in progressing the air quality agenda within the County Council and providing a link with other organisations. To date key achievements include the planning and implementation of the Lowesmoor Air Pollution Zone, progression of Port Street, Evesham junction re-configuration and progress towards a funding bid to the Low Emission Bus Scheme in addition to raising the air quality profile within the County Council.

The air quality representative is very active within the Steering Group. WRS meet regularly with the County Council representative in order to ensure that up to date information is shared and to ensure that channels of communication remain open.

## **2.5 Establishing a Steering Group**

In order to progress the implementation of actions identified in the Air Quality Action Plan for Worcestershire it was essential to engage with key stakeholders. To that end WRS set up the Worcestershire Air Quality Steering Group. The Group held its

inaugural meeting on 18<sup>th</sup> June 2014. Initial invited attendees included the following groups from affected areas:

- Representatives from Worcestershire County Council transport planning and health and wellbeing teams
- Local County and district Councillors with an interest in the AQMA areas, including relevant portfolio holders.
- Local interest groups such as residents groups, better environment theme groups etc.
- District council climate change officers, where such posts exist
- Freight Transport and Road Haulage Association representatives

Additional groups and interested parties will be invited to participate as actions relevant to them come forward for implementation, for example, involvement of local bus service providers where bus quality partnership initiatives are coming forward.

At the inaugural Steering Group meeting it was agreed to establish a number of sub-groups, each with a focus on a specific AQMA or area. This approach is thought to be the most efficient way forward due to the number of AQMAs across the County and the number of local authorities involved. The wider Steering Group will meet as and when appropriate while the sub-groups work to progress the implementation of priority actions for their areas. Six sub-groups have been established as follows:

- Bromsgrove Urban Sub Group covering Worcester Road, Redditch Road and Lickey End AQMAs.
- Hagley Sub Group covering the Hagley AQMA.
- Horsefair Sub Group covering the Horsefair, Kidderminster AQMA.
- Port Street Sub Group covering the Port Street, Evesham AQMA.
- Welch Gate Sub Group covering the Welch Gate, Bewdley AQMA.
- Worcester Urban Sub Group covering Dolday, Lowesmoor and the recently declared St. John's AQMAs plus the wider Worcester city centre area.

The sub-groups were developed in consultation with the Worcestershire County Council Air Quality Liaison Officer and are based on geographical and political area,

current proposed transport schemes, transport-specific issues and constraints and planned development growth.

Interested parties from the groups outlined above were invited to participate in relevant sub-groups. Invitees were advised that the groups will be working groups with the aim of implementing actions to improve air quality for the areas within their remit. A very limited response was received and whilst sub-groups have been reasonably active in some areas, in others there has been little interest in participation.

Sub-group meetings have taken place to date as follows:

Bromsgrove Urban plus Hagley Sub-Group	-	4 <sup>th</sup> December 2014
Worcester Urban Sub-Group	-	10 <sup>th</sup> December 2014
Port Street, Evesham Sub-Group	-	13 <sup>th</sup> January 2015

## **2.6 Sub-Group Specific Technical Discussion Papers**

Following discussions between WRS and Worcestershire County Council it was acknowledged that the air quality issues across Worcestershire are predominantly traffic related. Therefore in November 2014 Worcestershire County Council produced a series of technical discussion papers focussing on each of the sub-group areas. The discussion papers aimed to set the AQMAs in the context of transport-specific issues and constraints, planned development growth, local demographics and economic profiling as well as current proposed transport schemes. The discussion papers presented a number of transport-focused options for each area, with the focus on improving air quality. Following the development of these papers WRS consulted sub-group members for their input and produced a series of comments. Copies of these technical discussion papers and the subsequent WRS comments are provided as Appendix 3. The conclusions of both documents are discussed further in the following area-specific sections presented below.



## 3 Implementation of Actions

The following sections provide detailed information relating to the progress made with the implementation of actions for each of the AQMAs within Worcestershire.

### 3.1 Bromsgrove Urban Sub-Group Progress

The Bromsgrove Urban Sub-Group covers three AQMAs; Redditch Road, Worcester Road, and Lickey End. The sub-group currently consists of eight members, including two representatives from WRS, three District Councillors, the formal representative from Worcestershire County Council, the climate change officer for Bromsgrove District Council and the chief executive from Act on Energy.

The group initially met as part of the countywide steering group meeting held on 18<sup>th</sup> June 2014. The next meeting was held on the 4<sup>th</sup> December 2014 and centred on the Bromsgrove District AQMAs. At the later meeting it was agreed that the Lickey End AQMA would fall under the Bromsgrove Urban AQMA umbrella for practicality.

The following priority actions were identified by use of the prioritisation matrix for the Bromsgrove Urban AQMAs:-

#### Redditch Road AQMA

- 5.1.1 Alteration to phasing of traffic light systems
- 5.2.2 Freight Quality Partnership
- 5.3.4 Promote flexible working arrangements
- RR7 Two in road bus stops on carriageway either side of central street canyon

#### Worcester Road AQMA

- 5.3.8 Promote and support walking and cycling initiatives in Worcestershire
- 5.3.1 Travel Planning
- WR3 Zebra crossing at Hanover Street/Worcester Road causes congestion
- WR9 Local and school traffic causes congestion exiting Shrubbery Road (junction review)

## Lickey End AQMA

5.1.1 Alteration to phasing of traffic light systems

5.3.4 Promote flexible working arrangements

LE4 Narrowing of two lanes into one causes bottleneck at top of A38 south  
(junction review)

LE6 Traffic exiting Barnsley Hall Road – install no right turn restriction

LE7 Turning right into Harvester PH from A38 south- install no right turn restriction

The Worcestershire County Council technical discussion paper outlined a number of potential proposals for improving air quality within the Bromsgrove Urban AQMAs:

- 1 Investment in capacity enhancement of the A38 (Bromsgrove Eastern Bypass) Corridor - major investment will be required to support development growth and improve the efficiency of this corridor.
- 2 Investment in infrastructure and services to support sustainable modes in Bromsgrove urban area - major investment is proposed in walking and cycling infrastructure across the town to support increased modal shift towards low carbon modes of transport; particularly for shorter journeys.
- 3 Strategic decision making on accessibility measures in Bromsgrove Town Centre - long-term strategic transport vision prepared for the town, including promotion of more space-efficient and lower carbon modes of transport (walking, cycling, passenger transport and powered two-wheelers) and consideration of accessibility restraint for pollutant vehicles (weight restrictions, road closures).
- 4 Major expansion of Junction 1 of the M42 to accommodate existing and future demand
- 5 Stopping up of the B4096 at the M42 Junction 1 (Alcester Road/Old Birmingham Road arms)

Discussions with Worcestershire County Council indicated that the priority actions proposed by WRS relating to highways improvements would not be implemented in isolation but would be considered as part of the large scale transport development

proposed for the area. This includes the anticipated enhancements of the A38 Eastern Bypass and development of the M42 Junction 1 roundabout.

The Tables below detail the general progress made to date with the implementation of all identified options for each of the Bromsgrove Urban AQMAs; Redditch Road, Worcester Road and Lickey End. There are separate tables relating to actions that have been progressed, feasible actions that have not yet been progressed, and actions which have been identified as not being feasible to progress.

## Action Plan Progress – REDDITCH ROAD, BROMSGROVE AQMA

Table 3.1.1 – Progressed Actions to 30<sup>th</sup> April 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.1.1	Alteration to phasing of traffic light systems	Explore whether alteration to traffic light phasing around AQMA could improve flow within the AQMA, specifically in area where measured NO2 is particularly high.	Worcestershire County Council, Bromsgrove District Council	2015-2016	Not Known	Improved traffic flow and reduction in NO2	2%	County wide action plan adopted by Bromsgrove District Council. Measure identified as priority action for Redditch Road AQMA following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	County Highways technical discussion paper reviewed. Identified wider transport planning issues across the A38 road network given current demand and proposed development. Proposes that improvements will be made to the M42 Junction as part of these enhancements. County Council have stated that none of the prioritised actions relating to highway improvements will be considered in isolation but can be addressed as part of the proposed major works.
RR7	Two in road bus stops on carriageway either side of central street canyon	Move to further along the road with more desirable pull in places	Worcestershire County Council, Bus Operators	2015-2016	Not Known	New location of bus stops, reduction in queuing traffic	1%	County wide action plan adopted by Bromsgrove District Council. Measure identified as priority action for Redditch Road AQMA following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	County Highways technical discussion paper reviewed. Identified wider transport planning issues across the A38 road network given current demand and proposed development. Proposes that improvements will be made to the M42 Junction as part of these enhancements. County Council have stated that none of the prioritised actions relating to highway improvements will be considered in isolation but can be addressed as part of the proposed major works.
5.3.4	Promote flexible working arrangements	Promotion of flexible working arrangements with local	Worcestershire County Council, Bromsgrove District Council,	2015-2016	Easter 2015 onwards	Increase in use of flexible working arrangements with local businesses.	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South

		businesses to include working from home opportunities, staggered start times etc.	Climate Change Officers					recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.2.2	Freight Quality Partnership	Encourage freight vehicles to avoid AQMA and find alternative routes	Worcestershire County Council, Freight Transport Association, Road Haulage Association, Bromsgrove District Council	2015	2016 onwards	Significant reduction of strategic freight diverted away from AQMA.	2-5%	County wide action plan adopted by Bromsgrove District Council. Measure identified as priority action for Redditch Road AQMA following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	Steering Group identified that use of Worcestershire County Council Lorry Route Advisory Map has declined significantly in recent years due to now almost universal use of sat nav systems. Group agree should focus on working with sat nav data providers to ensure that HGVs are routinely routed around AQMAs.
5.5.4	Encourage developers to provide sustainable transport facilities and links serving new developments	Encourage and facilitate uptake of sustainable modes of transport where new developments are proposed	Bromsgrove District Council, Worcestershire County Council	2013	2014 onwards	Greater provision of sustainable transport facilities and links servicing new developments	1%	Installation of electric vehicle charging points, or EV ready points and provision of secure cycle stores is routinely recommended by Worcestershire Regulatory Services through the planning consultation process.	Worcestershire Regulatory Services is currently working towards formalising air quality recommendations as policy with the various Worcestershire LPAs
5.3.2	Encourage car sharing	Promote car sharing services within Bromsgrove	Bromsgrove District Council, Worcestershire County Council	2015-2016	Easter 2015 onwards	Increase in number of people car sharing	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.2.5	Greening Council and Business Fleets	Secure use of "cleaner" fuels/higher Euro standard vehicles for Council and Business fleets. Support bid for installation of CNG facility in	Bromsgrove District Council, Worcestershire County Council, Climate Change Officers	2015-2016	2016 onwards	Increase in number of Council and business fleet vehicles of higher Euro Standard and/or utilising alternative fuels	1%	Joint OLEV bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for funding to carry out feasibility studies for the installation of a compressed natural gas filling facility in Worcestershire, and three sites in Birmingham.	Steering Group supporting a joint bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for the installation of a compressed natural gas filling facility in Worcestershire.

		Worcestershire							
5.2.10	Installing electric vehicle charging points	Encourage and facilitate use of electric vehicles through provision of charging points in city	Bromsgrove District Council, Worcestershire County Council	2013	2014 onwards	Increase in availability of EV charging points and corresponding increase in use of electric vehicles	1%	Installation of EV charging points are routinely recommended by WRS for inclusion on relevant planning consents to all LPAs in Worcestershire	Worcestershire Regulatory Services is currently working towards formalising air quality recommendations as policy with the various Worcestershire LPAs
5.5.3	Encourage uptake of employer and residential travel plans for major employers and new developments to area	Promotion of alternative modes of transport through organisation and personal travel planning	Bromsgrove District Council, Worcestershire County Council	2015-2016	Easter 2015 onwards	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.3.1	Travel Planning	Promotion of alternative modes of transport through organisation and personal travel planning	Bromsgrove District Council, Worcestershire County Council, Climate Change Officers	2015-2016	Easter 2015 onwards	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.4.5	Raise the profile and increase awareness of air quality within the region	Publication campaign relating to air quality to publicise and raise awareness of air quality and its implications	Bromsgrove District Council, Worcestershire County Council, Climate Change Officers	2013	2014 onwards	Increased awareness at District, County and general public levels of air quality issues across the County	1%	The inception of the Air Quality Steering Group and ongoing liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the general public.	The inception of the Air Quality Steering Group and ongoing liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the general public.
5.3.9	smarter Choices - Choose How You	Use of marketing and information	Bromsgrove District Council,	2015/2016	Easter 2015	Change in behaviour towards more	1%	Worcestershire County Council, in conjunction with district councils, has previously run	The County Council team developing the service have developed a charging

	Move marketing initiatives	methods to encourage use of sustainable travel modes and typically include workplace, school, residential, community, travel planning, car sharing and clubs, and awareness raising campaigns	Worcestershire County Council, Climate Change Officers		onwards	sustainable modes of transport.		Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.4.4	Make air quality information more available and accessible	WRS to make all air quality documents available to the general public for access from the website	Worcestershire Regulatory Services	2013 onwards	2013 onwards	Improved availability of air quality information. More information proactively published on website.	1%	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.
5.5.1	Produce Air Quality Supplementary Planning Document	Document providing transparent and consistent advice to development control departments and developers relating to air quality	Bromsgrove District Council, Worcestershire Regulatory Services	2014	2015 onwards	Formally adopted and utilised AQ SPD at all six LPAs across Worcestershire	1%	Development of SPD for Air Quality started and on-going	Development of SPD for Air Quality started and on-going
5.6.3	Air Quality Networks	Group of councils working in partnership to address air quality issues across those areas	Bromsgrove District Council, Worcestershire Regulatory Services	2014	2014 onwards	Improved cross boundary working between local authorities in Worcestershire	1%	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.
5.6.8	Forge closer links with local health agencies	Aiming to forge partnership with local health authorities such as Public Health England to improve knowledge and	Worcestershire Regulatory Services, Local Health Agencies	2014	2014 onwards	Participation of relevant health agencies in the Worcestershire Air Quality Steering Group	1%	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date.	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date.

		understanding of local air quality and associated health risks							
5.3.8	Promote and support walking and cycling initiatives in Worcestershire	Imitative to encourage the uptake of walking and cycling by promoting the benefits using various packages such as The Chose How You Move Initiative	County Council, District Council, Climate Change Officer	2015-2016	Easter 2015 onwards	Change in behaviour to more sustainable modes of transport e.g. walking, cycling, public transport	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
NABD2	Investment in capacity enhancement of the A38 (Bromsgrove Eastern Bypass) Corridor	As part of the Bromsgrove District Plan and Worcestershire Strategic Economic Plan, it has been identified that major investment will be required in the A38 Bromsgrove Eastern Bypass to support development growth and improve the efficiency of this corridor.	Worcestershire County Council, Bromsgrove District Council	2015	Currently Unknown	Improvement of A38 Bromsgrove Eastern Bypass	5-10%	Following first steering group meeting the County Council prepared a technical discussion paper offering consideration of prioritised actions and potentially offering further solutions. Given large scale development proposed for the area and already over capacity transport infrastructure larger improvements are required rather than small, isolated measures.	A multi-modal model called BARHAM (Bromsgrove and Redditch Highways Assessment Model) has been developed by the County Council that will be used to model various A38 scenarios so that circumstances can be better understood and options for improvement developed.



## Action Plan Progress – REDDITCH ROAD, BROMSGROVE AQMA

**Table 3.1.2 Feasible Non-Progressed Non-Priority Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix but remain feasible actions to be considered in the future or as and when opportunities arise.

No.	Measure	Focus	Lead Authority	Comments
5.6.2	Influence Climate Change Strategy actions	Encourage strategies for improving climate change and local air quality	Climate Change Groups, District Council, County Council	Action has not yet been progressed.
5.2.1	Bus Quality Partnership	Working with bus partnerships to lower emissions	District Council, County Council, Bus Operators	County Council no longer manages any bus fleet other than school buses, all operators are now private companies
RR9	Difficult access to engineering company potentially causes issues at Hanbury Turn junction	Work with business re loading and unloading in non-peak times, assess if access can be improved	County Council, District Council, Business Operators	Action has not yet been progressed.
5.5.5	Compulsory Purchase Schemes	Effectively removing residential exposure by using compulsory purchase orders	County Council, District Council	Action has not yet been progressed.
5.1.9	Introduce or improve feeder/merger lanes to improve flow	Feeder/merger lanes to allow traffic to enter/exit carriageway without pausing at junction.	county council	Action has not yet been progressed.
5.3.6	Improve cycling and walking routes in local areas	Encourage comprehensive walking and cycling networks to compliment existing routes and integrating local transport hubs.	County Council, District Council	Action has not yet been progressed.
5.6.4	Lobby and support government to subsidise public transport	Encourage use of public transport by making more available, efficient and cheaper.	District Council, County Council	Action has not yet been progressed.
5.6.6	Lobby and support government to adopt policies to carry out nationally targeted green transport initiatives	Encourage uptake of sustainable modes of transport through green transport initiatives	District Council, County Council	Action has not yet been progressed.
5.2.6	Low Emission Zones	Restriction of polluting vehicles from AQMA	County Council, District Council	Action has not yet been progressed.
5.1.3	HGV or weight restriction on affected roads	Encourage HGVs to avoid AQMA and find alternative routes	County Council	Action has not yet been progressed.
RR6	High proportion of HGVs and LGVs due to several proximal industrial estates	Generic action relating to Greening Fleets, FQP,	County Council, District Council, Climate Change Officer	Action has not yet been progressed.
5.6.9	Development of a Low Emission Strategy for Worcestershire			Action has not yet been progressed.
5.3.7	Install secure cycle parking shelters	Secure cycle parking facilities to encourage the uptake of cycling.	County Council, District Council	Action has not yet been progressed.
RR2	Redditch Road is occasionally impacted by large volumes of congested traffic during motorway	Request WCC and HA review alternative routers for traffic during motorway incidents	County Council, Highways Authority	Action has not yet been progressed.

	incidents			
5.2.4	Railway Enhancements	Improvements to rail services to encourage patronage. Addition improvements to railway station may include cycle stores, footpath lighting, variable message signage and integrated bus services	County Council, District Council, Network Rail	Action has not yet been progressed.
5.6.7	Removal of receptors from air quality management areas	Purchase of houses and removal of receptors from their homes	District Council , County Council	Action has not yet been progressed.
RR11	Max exceedance is 6.2ug/m3 and total vehicle emissions needs to be reduced by 25%	Generic actions relating to FQPs, greening fleets, travel planning, travel plans, promotion of alternative transport	County Council, District Council, Climate Change Officers, Highways Authority	Action has not yet been progressed.
5.3.3	Promote teleconferencing and encourage uptake	Encouragement of business to use flexible working arrangements and technologies	County Council, District Council, Climate Change officers	Action has not yet been progressed.
5.6.5	Lobby and support government to ensure the manufacture and use of cleaner vehicles and fuels	Lobbying government to further ensure development of greener vehicles and fuels through policy changes, new initiatives and funding opportunities	County Council, District Council	Action has not yet been progressed.
5.1.4	Variable Message Signage (includes traffic info, car park info, bus and rail connection info etc.) Could be used in combination with Park and Ride schemes etc.	Use of VMS to encourage use of alternative modes of transport or direct drivers to car parks with spaces to avoid unnecessary journeys between car parks	County Council, District Council	Action has not yet been progressed.
5.4.2	Provide link to real time air quality information	Live and available air quality information	District Council	Action has not yet been progressed.
5.1.7	Improvement of signage for traffic to avoid AQMA	Encourage strategic traffic to avoid travelling through the AQMA and find alternative routes	County Highways	Action has not yet been progressed.
5.2.11	Roadside emissions testing	Undertaking roadside emissions testing to target worst polluting vehicles and issues fines under Regulations	District Council	Action has not yet been progressed.
5.6.1	Air quality policies in Local Development Plans	Air quality built into local development plans via consultation	County Council, District Council	Action has not yet been progressed.
5.5.2	Formula for s106 (or CIL) contribution towards mitigation measures and programmes	Gain S106 monies from developers for development impacting AQMAs or air quality that can be used towards mitigation measures and air quality improvements	District Councils	Action has not yet been progressed.
5.1.5	Loading and unloading restrictions during peak traffic times	Restrictions are already in place but further enforcement believed to improve traffic flow with AQMA.	District Council	Action has not yet been progressed.
5.1.8	Introduction of traffic signals at roundabouts	Introduction of traffic signals at roundabouts to improve traffic flow. Traffic flow held at more strategic point to improve flow through the AQMA.	County Council, District Council	Action has not yet been progressed.
5.2.3	Park and Ride Schemes	Provision of out of town car park for operation of park and ride bus service	District Council , County Council	Action has not yet been progressed.
5.2.7	Introduce fixed penalty notices for stationary idling	Enforce penalty notices for parked drivers who refuse to turn off engines	District Council	Action has not yet been progressed.
5.2.8	Introduce differential parking rates - engines	Different rates of parking depending on factors such as engine size, emissions	District Council, County Council	Action has not yet been progressed.
5.2.9	Introducing differential parking rates - air quality event	Parking rates linked to times of poor air quality or special events to encourage uptake of park and ride facilities	District Council, County Council	Action has not yet been progressed.
5.2.12	Signage identifying AQMA	Signs at various locations within or adjacent to the AQMA to encourage behavioural changes of drivers	County Council, District Council	Action has not yet been progressed.

5.3.5	Workplace parking charging schemes	Promote charging schemes to discourage single occupancy car journeys and encourage take up of sustainable alternatives (car sharing, cycling, walking, public transport)	District Council, County Council	Action has not yet been progressed.
5.3.10	Car Clubs	Pool ownership of cars for members use	County Council, District Council	Action has not yet been progressed.
5.4.1	Smarter Driving Tips	The introduction of environmentally conscious driving techniques and optimal vehicle operation (includes factors such as driving behaviour, tyre type and pressure, and speed management)	County Council, District Council, Climate Change officers	Action has not yet been progressed.
5.4.3	Establish an Air Quality Alert System	Free information service about air pollution and related health advice to individuals with health concerns made worse by poor air quality	County Council, District Council	Action has not yet been progressed.
RR3	Current boundary of AQMA requires amendment to conform with best practice guidance	Amend boundary following future dispersion modelling if revocation not appropriate	WRS, County Council	Action has not yet been progressed.
RR5	Properties close to roadside create street canyon	Not feasible to change without CPO and removal of properties	n/a	Action has not yet been progressed.
RR8	Access to the Bromsgrove Prep School potentially impacts Han bury Turn junction (	Generic action - school travel plans	n/a	Action has not yet been progressed.
RR10	Cars and HGVs biggest source of roadside emissions	Generic actions relating to FQPs, greening fleets, travel planning, travel plans, promotion of alternative transport	n/a	Action has not yet been progressed.
5.2.13	Tree Planting	Planting of green infrastructure in a bid to mitigate pollutants - no evidence of having significant impact within AQMAs	District Council, County Council	Action has not yet been progressed.
5.1.2	Change carriageway from two ways to one way. Consider inclusion of dedicated bus lane/cycle lane etc.	Maximising efficiency of roadway	County Council, District Council	Action has not yet been progressed.
5.1.10	Pedestrianisation of streets within area	Complete pedestrianisation and removal of emissions	County Council, District Council	Action has not yet been progressed.
5.1.14	Traffic calming measures (aim is to deter drivers using route)	Employ speed bumps or other measures to deter traffic from using the route	County Council	Action has not yet been progressed.

## Action Plan Progress – REDDITCH ROAD, BROMSGROVE AQMA

**Table 3.1.3 – Non-feasible Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix and have been discounted for the Redditch Road AQMA following further consideration. [These actions will not be reported on in the future.](#)

No	Measure	Focus	Reasons Why Action Not Feasible
5.1.6	Priority bus and high occupancy vehicle (HOV) lanes and corridors	Restricting parts of carriageway to priority vehicles	Carriageway is not wide enough to install an additional lane.
5.1.11	Remove build-out in streets to allow cars to pass simultaneously	Removing traffic calming measures or excessive pavement areas would increase road width and ease two way traffic flow	Build-out not considered being a factor within the Redditch Road AQMA.
5.1.12	Removal of parking bays in affected streets	Removal of parking bays in problem areas to increase road widths. To be undertaken with consideration to other alternatives for parking.	There are no parking bays that are considered to be an issue within the AQMA.
5.1.13	Alterations to parking provision and pricing (may result in decrease car use and increase uptake of public transport)	Increasing price to park to deter car journeys or sign post to cheaper more strategic alternatives	No local car parks identified as an issue within the vicinity of the AQMA.
RR1	A38 Redditch Road is major through route between two M5 junctions	Not feasible to change	Not a specific identified action and not something that is feasible to change.
RR4	Topography at either end is contributing factor to emissions	Not feasible to change	Not a specific identified action and not something that is feasible to change.

## Action Plan Progress – WORCESTER ROAD, BROMSGROVE AQMA

Table 3.1.4 – Progressed Actions to 30<sup>th</sup> April 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.3.8	Promote and support walking and cycling initiatives in Worcestershire	Initiatives to encourage the uptake of walking and cycling by promoting the benefits using various packages such as The Chose How You Move Initiatives	Worcestershire County Council, Bromsgrove District Council, Climate Change Officer	2015-2016	Easter 2015 onwards	Change in behaviour to more sustainable modes of transport e.g. walking, cycling, public transport	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
WR3	Zebra crossing at Hanover Street/Worcester Road causes congestion	Replace zebra crossing with footbridge if considered feasible	Worcestershire County Council, Bromsgrove District Council	2015-2016	Not Known	Improved traffic flow in area. Increased number of pedestrians using footbridge.	2%	County wide action plan adopted by Bromsgrove District Council. Measure identified as priority action for Worcester Road AQMA following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	County Highways technical discussion paper reviewed. Identified wider transport planning issues across the A38 road network given current demand and proposed development. Proposes that improvements will be made to the A38 corridor as part of these enhancements. County Council have stated that none of the prioritised actions relating to highway improvements will be considered in isolation but can be addressed as part of the proposed major works.
5.3.1	Travel Planning	Promotion of alternative modes of transport	Bromsgrove District Council, Worcestershire	2015-2016	Easter 2015 onwards	Increase in uptake of personal travel planning services. Change in	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move	The County Council team developing the service have developed a charging scheme for the remit of the service and

		through organisation and personal travel planning	County Council, Climate Change Officers		ds	behaviour towards more sustainable modes of transport.		campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
WR9	Local and school traffic causes congestion exiting Shrubbery Road junction. Action - junction review	Propose WCC undertake a junction review to ascertain improvements to current and future predicted flows. Also relates to generic action of school travel plan	Worcestershire County Council, Bromsgrove District Council	2015-2016	Not Known	Improved traffic flow in area of Shrubbery Road junction.	1%	County wide action plan adopted by Bromsgrove District Council. Measure identified as priority action for Worcester Road AQMA following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	County Highways technical discussion paper reviewed. Identified wider transport planning issues across the A38 road network given current demand and proposed development. Proposes that improvements will be made to the A38 corridor as part of these enhancements. County Council have stated that none of the prioritised actions relating to highway improvements will be considered in isolation but can be addressed as part of the proposed major works.
5.5.4	Encourage developers to provide sustainable transport facilities and links serving new developments	Encourage and facilitate uptake of sustainable modes of transport where new developments are proposed	Bromsgrove District Council, Worcestershire County Council, Worcestershire County Council	2013	2014 onwards	Greater provision of sustainable transport facilities and links servicing new developments	1%	Installation of electric vehicle charging points, or EV ready points and provision of secure cycle stores is routinely recommended by Worcestershire Regulatory Services through the planning consultation process.	Worcestershire Regulatory Services is currently working towards formalising air quality recommendations as policy with the various Worcestershire LPAs
5.3.2	Encourage car sharing	Promote car sharing services within Bromsgrove	Bromsgrove District Council, Worcestershire County Council	2015-2016	Easter 2015 onwards	Increase in number of people car sharing	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.2.5	Greening Council and Business	Secure use of "cleaner"	Bromsgrove District Council,	2015-2016	2016 onwards	Increase in number of Council and business fleet	1%	Joint OLEV bid between Birmingham City Council and Bromsgrove & Redditch	Steering Group supporting a joint bid between Birmingham City Council and

	Fleets	fuels/higher Euro standard vehicles for Council and Business fleets. Support bid for installation of CNG facility in Worcestershire	Worcestershire County Council, Climate Change Officers		ds	vehicles of higher Euro Standard and/or utilising alternative fuels		Borough Councils for funding to carry out feasibility studies for the installation of a compressed natural gas filling facility in Worcestershire, and three sites in Birmingham.	Bromsgrove & Redditch Borough Councils for the installation of a compressed natural gas filling facility in Worcestershire.
5.2.10	Installing electric vehicle charging points	Encourage and facilitate use of electric vehicles through provision of charging points in city	Bromsgrove District Council, Worcestershire County Council	2013	2014 onwards	Increase in availability of EV charging points and corresponding increase in use of electric vehicles	1%	Installation of EV charging points are routinely recommended by WRS for inclusion on relevant planning consents to all LPAs in Worcestershire	Worcestershire Regulatory Services is currently working towards formalising air quality recommendations as policy with the various Worcestershire LPAs
5.5.3	Encourage uptake of employer and residential travel plans for major employers and new developments to area	Promotion of alternative modes of transport through organisation and personal travel planning	Bromsgrove District Council, Worcestershire County Council	2015-2016	Easter 2015 onwards	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.3.1	Travel Planning	Promotion of alternative modes of transport through organisation and personal travel planning	Bromsgrove District Council, Worcestershire County Council, Climate Change Officers	2015-2016	Easter 2015 onwards	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.
5.4.5	Raise the profile and increase awareness of air quality within the region	Publication campaign relating to air quality to publicise and	Bromsgrove District Council, Worcestershire County Council, Climate Change	2013	2014 onwards	Increased awareness at District, County and general public levels of air quality issues across the County	1%	The inception of the Air Quality Steering Group and ongoing liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and	The inception of the Air Quality Steering Group and ongoing liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean

		raise awareness of air quality and its implications	Officers					county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the general public.	within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the general public.
5.3.9	Smarter Choices - Choose How You Move marketing initiatives	Use of marketing and information methods to encourage use of sustainable travel modes and typically include workplace, school, residential, community, travel planning, car sharing and clubs, and awareness raising campaigns	Bromsgrove District Council, Worcestershire County Council, Climate Change Officers	2015/2016	Easter 2015 onwards	Change in behaviour towards more sustainable modes of transport.	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.4.4	Make air quality information more available and accessible	WRS to make all air quality documents available to the general public for access from the website	Worcestershire Regulatory Services	2013 onwards	2013 onwards	Improved availability of air quality information. More information proactively published on website.	1%	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.
5.5.1	Produce Air Quality Supplementary Planning Document	Document providing transparent and consistent advice to development control departments and developers relating to air quality	Bromsgrove District Council, Worcestershire Regulatory Services	2014	2015 onwards	Formally adopted and utilised AQ SPD at all six LPAs across Worcestershire	1%	Development of SPD for Air Quality started and on-going	Development of SPD for Air Quality started and on-going
5.6.3	Air Quality Networks	Group of councils working in partnership to address air	Bromsgrove District Council, Worcestershire Regulatory	2014	2014 onwards	Improved cross boundary working between local authorities in Worcestershire	1%	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting



		quality issues across those areas	Services					planning across Worcestershire by allowing a more cohesive approach.	and action planning across Worcestershire by allowing a more cohesive approach.
5.6.8	Forge closer links with local health agencies	Aiming to forge partnership with local health authorities such as Public Health England to improve knowledge and understanding of local air quality and associated health risks	Worcestershire Regulatory Services, Local Health Agencies	2014	2014 onwards	Participation of relevant health agencies in the Worcestershire Air Quality Steering Group	1%	Relevant health agencies were invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest none have been represented at the Steering Group to date	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date.
5.3.4	Promote flexible working arrangements	Promotion of flexible working arrangements with local businesses to include working from home opportunities, staggered start times etc.	Worcestershire County Council, Bromsgrove District Council, Climate Change Officers	2015-2016	Easter 2015 onwards	Increase in use of flexible working arrangements with local businesses.	2%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.2.2	Freight Quality Partnership	Encourage freight vehicles to avoid AQMA and find alternative routes	Worcestershire County Council, Freight Transport Association, Road Haulage Association, Bromsgrove District Council	2015	2016 onwards	Significant reduction of strategic freight diverted away from AQMA.	5-10%	County wide action plan adopted by Bromsgrove District Council. Measure identified as priority action for Worcester Road AQMA following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	Steering Group identified that use of Worcestershire County Council Lorry Route Advisory Map has declined significantly in recent years due to now almost universal use of sat nav systems. Group agree should focus on working with sat nav data providers to ensure that HGVs are routinely routed around AQMAs.
NABD2	Investment in capacity enhancement of the A38 (Bromsgrove Eastern Bypass) Corridor	As part of the Bromsgrove District Plan and Worcestershire Strategic Economic Plan, it has been identified that major investment	Worcestershire County Council, Bromsgrove District Council	2015	Not Known	Improvement of A38 Bromsgrove Eastern Bypass	5-10%	Following first steering group meeting the County Council prepared a technical discussion paper offering consideration of prioritised actions and potentially offering further solutions. Given large scale development proposed for the area and already over capacity transport infrastructure larger improvements are required rather than small, isolated	A multi-modal model called BARHAM (Bromsgrove and Redditch Highways Assessment Model) has been developed by the County Council that will be used to model various A38 scenarios so that circumstances can be better understood and options for improvement developed.

		will be required in the A38 Bromsgrove Eastern Bypass to support development growth and improve the efficiency of this corridor.						measures.	
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### Action Plan Progress – WORCESTER ROAD, BROMSGROVE AQMA

**Table 3.1.5 – Feasible Non-Progressed Non-Priority Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix but remain feasible actions to be considered in the future or as and when opportunities arise.

No.	Measure	Focus	Lead Authority	Comments
5.6.2	Influence Climate Change Strategy actions	Encourage strategies for improving climate change and local air quality	Climate Change Groups, District Council, County Council	Action not yet progressed
5.2.6	Low Emission Zones	Restriction of polluting vehicles from AQMA	County Council, District Council	Action not yet progressed
5.1.9	Introduce or improve feeder/merger lanes to improve flow	Feeder/merger lanes to allow traffic to enter/exit carriageway without pausing at junction.	County Council	Action not yet progressed
5.6.9	Development of a Low Emission Strategy for Worcestershire			Action not yet progressed
5.1.4	Variable Message Signage (includes traffic info, car park info, bus and rail connection info etc.) Could be used in combination with Park and Ride schemes etc.	Use of VMS to encourage use of alternative modes of transport or direct drivers to car parks with spaces to avoid unnecessary journeys between car parks	County Council, District Council	Action not yet progressed
5.3.6	Improve cycling and walking routes in local areas	Encourage comprehensive walking and cycling networks to compliment existing routes and integrating local transport hubs.	County Council, District Council	Action not yet progressed
5.4.2	Provide link to real time air quality information	Live and available air quality information	District Council	Action not yet progressed
5.3.5	Workplace parking charging schemes	Promote charging schemes to discourage single occupancy car journeys and encourage take up of sustainable alternatives (car sharing, cycling, walking, public transport)	District Council, County Council	Action not yet progressed

5.6.4	Lobby and support government to subsidise public transport	Encourage use of public transport by making more available, efficient and cheaper.	District Council, County Council	Action not yet progressed
5.1.12	Removal of parking bays in affected streets	Removal of parking bays in problem areas to increase road widths. To be undertaken with consideration to other alternatives for parking.	County Council, District Council	Action not yet progressed
5.6.6	Lobby and support government to adopt policies to carry out nationally targeted green transport initiatives	Encourage uptake of sustainable modes of transport through green transport initiatives	District Council, County Council	Action not yet progressed
5.1.3	HGV or weight restriction on affected roads	Encourage HGVs to avoid AQMA and find alternative routes	County Council	Action not yet progressed
WR6	Reduced two way traffic flow due to residential parking near Turks Head PH	Introduce parking restrictions and provide space for residential parking with permits elsewhere in Worcestershire.	District Council, County Council	Action not yet progressed
5.5.5	Compulsory Purchase Schemes	Effectively removing residential exposure by using compulsory purchase orders	County Council, District Council	Action not yet progressed
5.3.7	Install secure cycle parking shelters	Secure cycle parking facilities to encourage the uptake of cycling.	County Council, District Council	Action not yet progressed
5.1.2	Change carriageway from two ways to one way. Consider inclusion of dedicated bus lane/cycle lane etc.	Maximising efficiency of roadway	County Council, District Council	Action not yet progressed
5.1.8	Introduction of traffic signals at roundabouts	Introduction of traffic signals at roundabouts to improve traffic flow. Traffic flow held at more strategic point to improve flow through the AQMA.	County Council, District Council	Action not yet progressed
5.1.13	Alterations to parking provision and pricing (may result in decrease car use and increase uptake of public transport)	Increasing price to park to deter car journeys or sign post to cheaper more strategic alternatives	District Council, County Council	Action not yet progressed
5.2.4	Railway Enhancements	Improvements to rail services to encourage patronage. Addition improvements to railway station may include cycle stores, footpath lighting, variable message signage and integrated bus services	County Council, District Council, Network Rail	Works currently being undertaken at Bromsgrove Railway Station not yet completed.
WR5	Eight school and nursery campuses within or adjacent to AQMA	This relates to generic actions such as school travel plans	District Council , County Council	Action not yet progressed
5.6.7	Removal of receptors from air quality management areas	Purchase of houses and removal of receptors from their homes	District Council , County Council	Action not yet progressed
5.2.3	Park and Ride Schemes	Provision of out of town car park for operation of park and ride bus service	District Council , County Council	Action not yet progressed
5.1.11	Remove build-out in streets to allow cars to pass simultaneously	Removing traffic calming measures or excessive pavement areas would increase road width and ease two way traffic flow	County Council, District Council	Action not yet progressed
5.1.1	Alteration to phasing of traffic light systems	Explore whether alteration to traffic light phasing around AQMA could improve flow within the AQMA, specifically in area where measured NO2 is particularly high.	County Council, District Council	Action not yet progressed
5.6.5	Lobby and support government to ensure the manufacture and use of cleaner vehicles and fuels	Lobbying government to further ensure development of greener vehicles and fuels through policy changes, new initiatives and funding opportunities	County Council, District Council	Action not yet progressed
WR8	Not enough parking spaces for One Stop convince store	Promote use of Public House car park through arrangement between businesses	County Council, District Council, Local Businesses	Action not yet progressed
5.3.3	Promote teleconferencing and encourage uptake	Encouragement of business to use flexible working arrangements and technologies	County Council, District Council, Climate Change officers	Action not yet progressed
5.2.11	Roadside emissions testing	Undertaking roadside emissions testing to target worst polluting vehicles and issues fines under Regulations	District Council	Action not yet progressed

5.6.1	Air quality policies in Local Development Plans	Air quality built into local development plans via consultation	County Council, District Council	Action not yet progressed
5.5.2	Formula for s106 (or CIL) contribution towards mitigation measures and programmes	Gain S106 monies from developers for development impacting AQMA's or air quality that can be used towards mitigation measures and air quality improvements	District Councils	Action not yet progressed
5.1.5	Loading and unloading restrictions during peak traffic times	Restrictions are already in place but further enforcement believed to improve traffic flow with AQMA.	District Council	Action not yet progressed
5.1.7	Improvement of signage for traffic to avoid AQMA	Encourage strategic traffic to avoid travelling through the AQMA and find alternative routes	County Highways	Action not yet progressed
5.2.7	Introduce fixed penalty notices for stationary idling	Enforce penalty notices for parked drivers who refuse to turn off engines	District Council	Action not yet progressed
5.2.8	Introduce differential parking rates - engines	Different rates of parking depending on factors such as engine size, emissions	District Council, County Council	Action not yet progressed
5.2.9	Introducing differential parking rates - air quality event	Parking rates linked to times of poor air quality or special events to encourage uptake of park and ride facilities	District Council, County Council	Action not yet progressed
5.2.12	Signage identifying AQMA	Signs at various locations within or adjacent to the AQMA to encourage behavioural changes of drivers	County Council, District Council	Action not yet progressed
5.3.10	Car Clubs	Pool ownership of cars for members use	County Council, District Council	Action not yet progressed
5.4.1	Smarter Driving Tips	The introduction of environmentally conscious driving techniques and optimal vehicle operation (includes factors such as driving behaviour, tyre type and pressure, and speed management)	County Council, District Council, Climate Change officers	Action not yet progressed
5.4.3	Establish an Air Quality Alert System	Free information service about air pollution and related health advice to individuals with health concerns made worse by poor air quality	County Council, District Council	Action not yet progressed
WR2	Current boundary of AQMA requires amendment and extension	Amend boundary of AQMA following setting up of steering group	WRS, District Council	Action not yet progressed
WR4	Two street canyons within the AQMA	Canyons may be effectively removed via compulsory purchase order - refer to generic actions	n/a	Action not yet progressed
WR7	Bulbous traffic calming at Shrubbery Road junction	Refer to generic action - Remove all build out	n/a	Action not yet progressed
WR11	Old bus fleet	Refer to generic action - Bus Quality Partnership	n/a	Action not yet progressed
WR12	Modelling indicates exceedances only at properties within street canyons	Refers to generic actions such as CPO, parking restrictions, bus quality partnership and freight quality partnership	n/a	Action not yet progressed
WR13	Cars are biggest source of roadside pollutants	Refers to generic actions such as travel plans, promotion of alternatives, electric charging points, parking restrictions	n/a	Action not yet progressed
WR10	Sanders Road Industrial Estate and Market Site car park are redevelopment targets	Work closely with LPA and LA to ensure air quality is not further compromised. Refers to generic actions such as S106, CIL funding for improvements	Local Planning Authority, District Council	Action not yet progressed
WR14	25 to 50% reduction in total vehicle emissions required	Refers to generic actions such as travel plans, smarter choices measures, electric charging points, parking restrictions	n/a	Action not yet progressed
5.1.10	Pedestrianisation of streets within area	Complete pedestrianisation and removal of emissions	County Council, District Council	Action not yet progressed
5.1.14	Traffic calming measures (aim is to deter drivers using route)	Employ speed bumps or other measures to deter traffic from using the route	County Council	Action not yet progressed
5.2.13	Tree Planting	Planting of green infrastructure in a bid to mitigate pollutants - no evidence of having significant impact within AQMA's	District Council, County Council	Action not yet progressed

## Action Plan Progress – WORCESTER ROAD, BROMSGROVE AQMA

**Table 3.1.6 – Non-Feasible Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix and have been discounted as unfeasible for the Worcester Road AQMA following further consideration. [These actions will not be reported on in the future.](#)

No	Measure	Focus	Reasons Why Action Not Feasible
5.1.6	Priority bus and high occupancy vehicle (HOV) lanes and corridors	Restricting parts of carriageway to priority vehicles	The carriageway is not wide enough to accommodate this action.
WR1	Close to town centre and busy junction	Not feasible to change	It is not feasible to change the location of the town centre and proximity of busy junctions.

## Action Plan Progress – LICKEY END, BROMSGROVE AQMA

**Table 3.1.7 – Progressed Actions to 30<sup>th</sup> April 2015**

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
LE6	Traffic exiting Barnsley Hall Road right. Action - no right turn restriction	Traffic exiting from junction causes delays in traffic flow in both directions along the A38.	Worcestershire County Council, Bromsgrove District Council	2014-2015	Not Known	Decrease in obstruction to traffic flow	1%	County wide action plan adopted by Bromsgrove District Council. Measure identified as priority action for Lickey End AQMA following assessment using prioritisation matrix tool. Research carried out regarding implementation	County Highways technical discussion paper reviewed. Identified wider transport planning issues across the A38 road network given current demand and proposed development. Proposes that improvements will be made to the M42 Junction as part of these

		Proposed action is to make junction no right turn.						feasibility.	enhancements. County Council have stated that none of the prioritised actions relating to highway improvements will be considered in isolation but can be addressed as part of the proposed major works.
5.1.1	Alteration to phasing of traffic light systems	Explore whether alteration to traffic light phasing around AQMA could improve flow within the AQMA, specifically in area where measured NO2 is particularly high.	Worcestershire County Council, Bromsgrove District Council	2014-2015	Not Known	Improved traffic flow and reduction in NO2	2%	County wide action plan adopted by Bromsgrove District Council. Measure identified as priority action for Lickey End AQMA following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	County Highways technical discussion paper reviewed. Identified wider transport planning issues across the A38 road network given current demand and proposed development. Proposes that improvements will be made to the M42 Junction as part of these enhancements. County Council have stated that none of the prioritised actions relating to highway improvements will be considered in isolation but can be addressed as part of the proposed major works.
LE7	Turning right into Harvester PH from A38 south. Action - no right turn restriction	Traffic turning right into Harvester PH from the A38 causes a delay in traffic flow	Worcestershire County Council, Bromsgrove District Council	2014-2015	Not Known	Improved traffic flow and reduction in NO2	1%	County wide action plan adopted by Bromsgrove District Council. Measure identified as priority action for Lickey End AQMA following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	County Highways technical discussion paper reviewed. Identified wider transport planning issues across the A38 road network given current demand and proposed development. Proposes that improvements will be made to the M42 Junction as part of these enhancements. County Council have stated that none of the prioritised actions relating to highway improvements will be considered in isolation but can be addressed as part of the proposed major works.
LE4	Narrowing of two lanes into one causes bottleneck at top of A38 south. Action - junction review	Two lanes changing into one at the top of the A38 southbound causing bottleneck and slowing of traffic. Action is to review and improve traffic system.	Worcestershire County Council, Bromsgrove District Council	2014-2015	Not Known	Improved traffic flow and reduction in NO2	3%	County wide action plan adopted by Bromsgrove District Council. Measure identified as priority action for Lickey End AQMA following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	County Highways technical discussion paper reviewed. Identified wider transport planning issues across the A38 road network given current demand and proposed development. Proposes that improvements will be made to the M42 Junction as part of these enhancements. County Council have stated that none of the prioritised actions relating to highway improvements will be considered in isolation but can be addressed as part of the proposed major works.
5.3.4	Promote flexible working arrangements	Promotion of flexible working arrangements with local businesses to include working	Worcestershire County Council, Bromsgrove District Council, Climate Change Officers	2015-2016	Easter 2015 onwards	Increase in use of flexible working arrangements with local businesses.	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole

		from home opportunities, staggered start times etc.						results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	county in the future.
5.5.4	Encourage developers to provide sustainable transport facilities and links serving new developments	Encourage and facilitate uptake of sustainable modes of transport where new developments are proposed	Bromsgrove District Council, Worcestershire County Council	2013	2014 onwards	Greater provision of sustainable transport facilities and links servicing new developments	1%	Installation of electric vehicle charging points, or EV ready points and provision of secure cycle stores is routinely recommended by Worcestershire Regulatory Services through the planning consultation process.	Worcestershire Regulatory Services is currently working towards formalising air quality recommendations as policy with the various Worcestershire LPAs
5.3.2	Encourage car sharing	Promote car sharing services within Wyre Forest	Bromsgrove District Council, Worcestershire County Council	2015-2016	Easter 2015 onwards	Increase in number of people car sharing	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.2.5	Greening Council and Business Fleets	Secure use of "cleaner" fuels/higher Euro standard vehicles for Council and Business fleets. Support bid for installation of CNG facility in Worcestershire	Bromsgrove District Council, Worcestershire County Council, Climate Change Officers	2015-2016	2016 onwards	Increase in number of Council and business fleet vehicles of higher Euro Standard and/or utilising alternative fuels	1%	Joint OLEV bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for funding to carry out feasibility studies for the installation of a compressed natural gas filling facility in Worcestershire, and three sites in Birmingham.	Steering Group supporting a joint bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for the installation of a compressed natural gas filling facility in Worcestershire.
5.2.10	Installing electric vehicle charging points	Encourage and facilitate use of electric vehicles through provision of charging points in city	Bromsgrove District Council, Worcestershire County Council	2013	2014 onwards	Increase in availability of EV charging points and corresponding increase in use of electric vehicles	1%	Installation of EV charging points are routinely recommended by WRS for inclusion on relevant planning consents to all LPAs in Worcestershire	Worcestershire Regulatory Services is currently working towards formalising air quality recommendations as policy with the various Worcestershire LPAs

5.5.3	Encourage uptake of employer and residential travel plans for major employers and new developments to area	Promotion of alternative modes of transport through organisation and personal travel planning	Bromsgrove District Council, Worcestershire County Council	2015-2016	Easter 2015 onwards	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.3.1	Travel Planning	Promotion of alternative modes of transport through organisation and personal travel planning	Bromsgrove District Council, Worcestershire County Council, Climate Change Officers	2015-2016	Easter 2015 onwards	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.4.5	Raise the profile and increase awareness of air quality within the region	Publication campaign relating to air quality to publicise ND raise awareness of air quality and its implications	Bromsgrove District Council, Worcestershire County Council, Climate Change Officers	2013	2014 onwards	Increased awareness at District, County and general public levels of air quality issues across the County	1%	The inception of the Air Quality Steering Group and ongoing liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the general public.	The inception of the Air Quality Steering Group and ongoing liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the general public.
5.3.9	Smatter Choices - Choose How You Move marketing initiatives	Use of marketing and information methods to encourage use of	Bromsgrove District Council, Worcestershire County Council,	2015/2016	Easter 2015 onwards	Change in behaviour towards more sustainable modes of transport.	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan



		sustainable travel modes and typically include workplace, school, residential, community, travel planning, car sharing and clubs, and awareness raising campaigns	Climate Change Officers					recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.4.4	Make air quality information more available and accessible	WRS to make all air quality documents available to the general public for access from the website	Worcestershire Regulatory Services	2013 onwards	2013 onwards	Improved availability of air quality information. More information proactively published on website.	1%	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.
5.5.1	Produce Air Quality Supplementary Planning Document	Document providing transparent and consistent advice to development control departments and developers relating to air quality	Bromsgrove District Council, Worcestershire Regulatory Services	2014	2015 onwards	Formally adopted and utilised AQ SPD at all six LPAs across Worcestershire	1%	Development of SPD for Air Quality started and on-going	Development of SPD for Air Quality started and on-going
5.6.3	Air Quality Networks	Group of councils working in partnership to address air quality issues across those areas	Bromsgrove District Council, Worcestershire Regulatory Services	2014	2014 onwards	Improved cross boundary working between local authorities in Worcestershire	1%	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.
5.6.8	Forge closer links with local health agencies	Aiming to forge partnership with local health authorities such as Public Health England to improve knowledge and understanding of local air quality	Worcestershire Regulatory Services, Local Health Agencies	2014	2014 onwards	Participation of relevant health agencies in the Worcestershire Air Quality Steering Group	1%	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date.	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date.

		and associated health risks							
5.3.8	Promote and support walking and cycling initiatives in Worcestershire	Initiative to encourage the uptake of walking and cycling by promoting the benefits using various packages such as The Chose How You Move Initiative	Worcestershire County Council, Bromsgrove District Council, Climate Change Officer	2015-2016	Easter 2015 onwards	Change in behaviour to more sustainable modes of transport e.g. walking, cycling, public transport	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.2.2	Freight Quality Partnership	Encourage freight vehicles to avoid AQMA and find alternative routes	Worcestershire County Council, Freight Transport Association, Road Haulage Association, Bromsgrove District Council	2015	2016 onwards	Significant reduction of strategic freight diverted away from AQMA.	2%	County wide action plan adopted by Bromsgrove District Council. Measure identified as priority action for Lickey End AQMA following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	Steering Group identified that use of Worcestershire County Council Lorry Route Advisory Map has declined significantly in recent years due to now almost universal use of sat nav systems. Group agree should focus on working with sat nav data providers to ensure that HGVs are routinely routed around AQMAS.
NABD1	Expansion of motorway junction	Major expansion to junction to accommodate volume of traffic	Worcestershire County Council, Highways Agency, Bromsgrove District Council	2015	Not Known	Expansion of junction	5-10%	Following first steering group meeting the County Council prepared a technical discussion paper offering consideration of prioritised actions and potentially offering further solutions. Given large scale development proposed for the area and already over capacity transport infrastructure larger improvements are required rather than small, isolated measures.	County Council have requested Highways Agency undertake a full feasibility study to investigate all possible options including potential for removal of the junction altogether. There is scope for funding to be secured for investigation from Highways Agency as part of the Roads Investment Strategy relating to air quality projects. It is acknowledged that the junction is too small and not working as it should and it is considered that M42 improvements are key to that.
NABD2	Investment in capacity enhancement of the A38 (Bromsgrove Eastern Bypass) Corridor	As part of the Bromsgrove District Plan and Worcestershire Strategic Economic Plan, it has been identified that major investment will be required	Worcestershire County Council, Bromsgrove District Council	2015	Not Known	Improvement of A38 Bromsgrove Eastern Bypass	5-10%	Following first steering group meeting the County Council prepared a technical discussion paper offering consideration of prioritised actions and potentially offering further solutions. Given large scale development proposed for the area and already over capacity transport infrastructure larger improvements are required rather than small, isolated measures.	A multi-modal model called BARHAM (Bromsgrove and Redditch Highways Assessment Model) has been developed by the County Council that will be used to model various A38 scenarios so that circumstances can be better understood and options for improvement developed.

		in the A38 Bromsgrove Eastern Bypass to support development growth and improve the efficiency of this corridor.							
NABD3	Stopping up of the B4096 (Alcester Road/Old Birmingham Road)	The B4096 leads to residential areas either side of Junction 1 of the M42. Stopping up these accesses could significantly improve the efficiency of this junction.	Worcestershire County Council, Bromsgrove District Council	2015	Not Known	Removal of B4096 from Junction 1 of the M42	2-5%	Following first steering group meeting the County Council prepared a technical discussion paper offering consideration of prioritised actions and potentially offering further solutions. Given large scale development proposed for the area and already over capacity transport infrastructure larger improvements are required rather than small, isolated measures.	County Council have requested Highways Agency undertake a full feasibility study to investigate all possible options including potential for removal of the junction altogether. There is scope for funding to be secured for investigation from Highways Agency as part of the Roads Investment Strategy relating to air quality projects. It is acknowledged that the junction is too small and not working as it should and it is considered that M42 improvements are key to that.

## Action Plan Progress – LICKEY END, BROMSGROVE AQMA

**Table 3.1.8 Feasible Non-Progressed Non-Priority Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix but remain feasible actions to be considered in the future or as and when opportunities arise.

No.	Measure	Focus	Lead Authority	Comments
5.2.1	Bus Quality Partnership	Working with bus partnerships to lower emissions	District Council, County Council, Bus Operators	County Council no longer manages any bus fleet other than school buses, all operators are now private companies
LE5	School Lane is busy junction just south of AQMA	Review Lickey End First School Travel Plan. Engage alternative modes of transport and routes.	County Council	Action not yet progressed
LE8	Exiting right from Esso garage towards gyratory (no turning right restriction)	No right turn restriction	county council, district council	Action not yet progressed

5.1.3	HGV or weight restriction on affected roads	Encourage HGVs to avoid AQMA and find alternative routes	County Council	Action not yet progressed
5.1.9	Introduce or improve feeder/merger lanes to improve flow	Feeder/merger lanes to allow traffic to enter/exit carriageway without pausing at junction.	county council	Action not yet progressed
LE3	A38 south pedestrian crossing cause pause in flow (replace with footbridge if possible)	Replace pedestrian crossing with footbridge	County Council, District Council	Action not yet progressed
LE10	In carriageway bus stop A38 south	Move bus stop further south or create pull-in bus stop	county council, district council	Action not yet progressed
5.6.4	Lobby and support government to subsidise public transport	Encourage use of public transport by making more available, efficient and cheaper.	District Council, County Council	Action not yet progressed
5.6.6	Lobby and support government to adopt policies to carry out nationally targeted green transport initiatives	Encourage uptake of sustainable modes of transport through green transport initiatives	District Council, County Council	Action not yet progressed
5.2.6	Low Emission Zones	Restriction of polluting vehicles from AQMA	County Council, District Council	Action not yet progressed
5.6.7	Removal of receptors from air quality management areas	Purchase of houses and removal of receptors from their homes	District Council , County Council	Action not yet progressed
5.2.3	Park and Ride Schemes	Provision of out of town car park for operation of park and ride bus service	District Council , County Council	Action not yet progressed
5.3.7	Install secure cycle parking shelters	Secure cycle parking facilities to encourage the uptake of cycling.	County Council, District Council	Action not yet progressed
LE2	A38 south from gyratory is very busy route, comes under extra pressure during motorway incidents	Request WCC and HA review alternative routes for traffic during incidents/closure of motorway	County Council, Highways Authority	Action not yet progressed
5.2.4	Railway Enhancements	Improvements to rail services to encourage patronage. Addition improvements to railway station may include cycle stores, footpath lighting, variable message signage and integrated bus services	County Council, District Council, Network Rail	Works currently being undertaken on Bromsgrove Railway Station not yet completed.
5.3.3	Promote teleconferencing and encourage uptake	Encouragement of business to use flexible working arrangements and technologies	County Council, District Council, Climate Change officers	Action not yet progressed
LE1	Current boundary of AQMA requires amendment to conform with best practice guidance	Amend boundary of AQMA following future dispersion modelling if revocation is not appropriate	WRS	Action not yet progressed
5.2.11	Roadside emissions testing	Undertaking roadside emissions testing to target worst polluting vehicles and issues fines under Regulations	District Council	Action not yet progressed
5.6.1	Air quality policies in Local Development Plans	Air quality built into local development plans via consultation	County Council, District Council	Action not yet progressed
5.5.2	Formula for s106 (or CIL) contribution towards mitigation measures and programmes	Gain S106 monies from developers for development impacting AQMAs or air quality that can be used towards mitigation measures and air quality improvements	District Councils	Action not yet progressed
LE9	Lane marking on gyratory approach to B4096 north and M42 appear to confuse drivers	Request WCC to review junction to ascertain whether any improvements can be made	County Council	Action not yet progressed
5.6.5	Lobby and support government to ensure the manufacture and use of cleaner vehicles and fuels	Lobbying government to further ensure development of greener vehicles and fuels through policy changes, new initiatives and funding opportunities	County Council, District Council	Action not yet progressed
LE11	No visible restrictions on gyratory with exception of box marking which are sometimes ignored	Increase restrictions and repaint double yellow lines on the gyratory and on the approaches where appropriate. Cameras and penalties for vehicles ignoring markings.	County Council	Action not yet progressed

5.4.2	Provide link to real time air quality information	Live and available air quality information	District Council	Action not yet progressed
5.1.4	Variable Message Signage (includes traffic info, car park info, bus and rail connection info etc.) Could be used in combination with Park and Ride schemes etc.	Use of VMS to encourage use of alternative modes of transport or direct drivers to car parks with spaces to avoid unnecessary journeys between car parks	County Council, District Council	Action not yet progressed
5.6.2	Influence Climate Change Strategy actions	Encourage strategies for improving climate change and local air quality	Climate Change Groups, District Council, County Council	Action not yet progressed
5.1.5	Loading and unloading restrictions during peak traffic times	Restrictions are already in place but further enforcement believed to improve traffic flow with AQMA.	District Council	Action not yet progressed
5.1.7	Improvement of signage for traffic to avoid AQMA	Encourage strategic traffic to avoid travelling through the AQMA and find alternative routes	County Highways	Action not yet progressed
5.1.8	Introduction of traffic signals at roundabouts	Introduction of traffic signals at roundabouts to improve traffic flow. Traffic flow held at more strategic point to improve flow through the AQMA.	County Council, District Council	Action not yet progressed
5.2.7	Introduce fixed penalty notices for stationary idling	Enforce penalty notices for parked drivers who refuse to turn off engines	District Council	Action not yet progressed
5.2.8	Introduce differential parking rates - engines	Different rates of parking depending on factors such as engine size, emissions	District Council, County Council	Action not yet progressed
5.2.9	Introducing differential parking rates - air quality event	Parking rates linked to times of poor air quality or special events to encourage uptake of park and ride facilities	District Council, County Council	Action not yet progressed
5.2.12	Signage identifying AQMA	Signs at various locations within or adjacent to the AQMA to encourage behavioural changes of drivers	County Council, District Council	Action not yet progressed
5.2.13	Tree Planting	Planting of green infrastructure in a bid to mitigate pollutants - no evidence of having significant impact within AQMAs	District Council, County Council	Action not yet progressed
5.3.5	Workplace parking charging schemes	Promote charging schemes to discourage single occupancy car journeys and encourage take up of sustainable alternatives (car sharing, cycling, walking, public transport)	District Council, County Council	Action not yet progressed
5.3.6	Improve cycling and walking routes in local areas	Encourage comprehensive walking and cycling networks to compliment existing routes and integrating local transport hubs.	County Council, District Council	Action not yet progressed
5.3.10	Car Clubs	Pool ownership of cars for members use	County Council, District Council	Action not yet progressed
5.4.1	Smarter Driving Tips	The introduction of environmentally conscious driving techniques and optimal vehicle operation (includes factors such as driving behaviour, tyre type and pressure, and speed management)	County Council, District Council, Climate Change officers	Action not yet progressed
5.4.3	Establish an Air Quality Alert System	Free information service about air pollution and related health advice to individuals with health concerns made worse by poor air quality	County Council, District Council	Action not yet progressed
LE12	Long term trend data indicated higher pollution levels associated with A38 instead of M42	Targeted monitoring of existing and new locations and analysis to continue	WRS	Action not yet progressed
LE13	Further assessment is out of date (undertake up to date dispersion modelling and source apportionment)	Undertake up to date detailed dispersion modelling using latest tools and data	WRS	Action not yet progressed
LE14	Additional monitoring points required to capture data from different points	Locate and emplace new monitoring points depending on access	WRS	Action not yet progressed

LE15	Options identified in previous AQAP focus on M24 improvements mostly not implementable	Undertake detailed dispersion modelling using latest tools and data	WRS	Action not yet progressed
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## Action Plan Progress – LICKEY END, BROMSGROVE AQMA

**Table 3.1.9 Non-feasible Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix and have been discounted as unfeasible for the Lickey End AQMA following further consideration. These actions will not be reported on in the future.

No	Measure	Focus	Reasons Why Action Not Feasible
5.1.6	Priority bus and high occupancy vehicle (HOV) lanes and corridors	Restricting parts of carriageway to priority vehicles	Carriageway is not wide enough to install an additional lane.
5.1.11	Remove build-out in streets to allow cars to pass simultaneously	Removing traffic calming measures or excessive pavement areas would increase road width and ease two way traffic flow	Build-out not considered to be a factor within the Lickey End AQMA.
5.1.12	Removal of parking bays in affected streets	Removal of parking bays in problem areas to increase road widths. To be undertaken with consideration to other alternatives for parking.	There are no parking bays that are considered to be an issue within the AQMA.
5.1.13	Alterations to parking provision and pricing (may result in decrease car use and increase uptake of public transport)	Increasing price to park to deter car journeys or sign post to cheaper more strategic alternatives	No local car parks identified within the vicinity of the AQMA.

## 3.2 Hagley Sub-Group Progress

The Kidderminster Road, Hagley AQMA sub-group currently consists of seven members, including two representatives from WRS, one District Councillor, one Parish Councillor, the formal representative from Worcestershire County Council, the climate change officer for Bromsgrove District Council and the chief executive from Act on Energy.

The group initially met as part of the countywide steering group meeting held on 18<sup>th</sup> June 2014. The next meeting was held on the 4<sup>th</sup> December 2014 and generally centred on the AQMAs within the Bromsgrove District.

The following priority actions were identified by use of the prioritisation matrix for the Hagley AQMA:

5.1.1 Alteration to phasing of traffic light systems

5.2.2 Freight Quality Partnership

KR5 Significant queuing traffic in both directions on A456 heading for A491  
Stourbridge Road (junction review)

5.1.8 Introduction of traffic signals at roundabouts

5.1.4 Variable Message Signage (includes traffic info, car park info, bus and rail connection info etc.)

The Worcestershire County Council technical discussion paper outlined a number of potential proposals for improving air quality within the Hagley AQMA:

1. Signalised Junction of A491 (Stourbridge Road) with A456 (Kidderminster Road/Birmingham Road) – investment in signal equipment (signal control optimisation package such as MOVA could be particularly beneficial).
2. Signalised pedestrian crossing outside Aston Martin Garage (A456) – potential to link with the above.
3. Signalised pedestrian crossing on approach to Hagley Island (A456)
4. The Hagley Island (junction of A456 Kidderminster Road with A491 Stourbridge Road) - a major enhancement scheme is proposed to improve

capacity at this island and integrate the signalised pedestrian crossing into a multiphased, multimodal junction arrangement.

The Tables below detail the general progress made to date with the implementation of all identified options for the Kidderminster Road, Hagley AQMA. There are separate tables relating to actions that have been progressed, feasible actions that have not yet been progressed, and actions which have been identified as not being feasible to progress.



## Action Plan Progress – KIDDERMINSTER ROAD, HAGLEY AQMA

Table 3.2.1 - Progressed Actions to 30<sup>th</sup> April 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.1.1	Alteration to phasing of traffic light systems	Traffic exiting from junction causes delays in traffic flow in both directions along the A38. Proposed action is to make junction no right turn.	Worcestershire County Council, Bromsgrove District Council	2015-2016	2020	Decrease in obstruction to traffic flow	1%	County wide action plan adopted by Bromsgrove District Council. Measure identified as priority action for Kidderminster Road, Hagley AQMA following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	County Highways technical paper received and reviewed. County have indicated that the pedestrian crossing outside Aston Martin Garage on A456 could potentially be linked to new signalised junction (as referred to in action KR5). Proposals include update of equipment and junction realignment, potentially change to MOVA. WCC recommend the sub-group pursues a junction redesign of all obstacles as part of developer-funded investment package. Funding will predominately require communication and agreement between WCC Highways Planning Team, BDC Development Control team and prospective developers. However, WCC have indicated funding may be available from other sources such as the Local Enterprise Partnership (LEP) or EU funding streams.
5.2.2	Freight Quality Partnership	Encourage freight vehicles to avoid AQMA and find alternative routes	Worcestershire County Council, Freight Transport Association, Road Haulage Association, Bromsgrove District Council	2015-2016	2016-2017	Decreased in freight movements through AQMA	2-5%	County wide action plan adopted by Bromsgrove District Council. Measure identified as priority action for Kidderminster Road, Hagley AQMA following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	Further discussion with County Highways identified two separate approaches: 1 - use of paper HGV route maps is now outdated, work should focus on updating data with sat nav companies to ensure route planning avoids AQMAs. 2. A wider FQP that potentially restricts HGV access to AQMAs could form part of a wider Transport Strategy for Worcester.
KR5	Significant queuing traffic observed in both directions on A456 heading for A491 Stourbridge Road. Action -	Propose WCC undertake a junction review to ascertain improvements to current and future predicted flows	Worcestershire County Council	2015-2016	Not Known	Reduction in number of queuing vehicles	1%	County wide action plan adopted by Bromsgrove District Council. Measure identified as priority action for Kidderminster Road, Hagley AQMA following assessment using prioritisation matrix tool. Research carried out regarding implementation	County Highways technical paper received and reviewed. County propose that an update of equipment and junction realignment, potentially change to MOVA, would be beneficial to this junction. WCC recommend the sub-group pursues a junction redesign of all obstacles as part of

	junction review							feasibility.	developer-funded investment package. Funding will predominately require communication and agreement between WCC Highways Planning Team, BDC Development Control team and prospective developers. However, WCC have indicated funding may be available from other sources such as the Local Enterprise Partnership (LEP) or EU funding streams.
5.1.8	Introduction of traffic signals at roundabouts	Introduction of traffic signals at roundabouts to improve traffic flow. Traffic flow held at more strategic point to improve flow through the AQMA.	Worcestershire County Council, Bromsgrove District Council	2014	2015-2016	Improved traffic flow	1%	County wide action plan adopted by Bromsgrove District Council. Measure identified as priority action for Kidderminster Road, Hagley AQMA following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	County Highways technical paper received and reviewed. Major enhancement scheme is proposed as part of the Cala Homes development. WCC have confirmed this has been through the design stage and indicated that works are nearing completion. The Wychbury Inn junction has also had its signalling equipment upgraded and linked to the signals at the new roundabout, which should result in improved (more consistent) traffic flow through the AQMA.
5.1.4	Variable Message Signage (includes traffic info, car park info, bus and rail connection info etc.) Could be used in combination with Park and Ride schemes etc.	Use of VMS to encourage use of alternative modes of transport or direct drivers to car parks with spaces to avoid unnecessary journeys between car parks	Worcestershire County Council, Bromsgrove District Council	2015	n/a	Decreased in traffic movements through AQMA	1%	County wide action plan adopted by Bromsgrove District Council. Measure identified as priority action for Kidderminster Road, Hagley AQMA following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	Following consultation with WCC ahead of the second steering group meeting it was proposed that this action is more efficiently achieved and resourced by undertaking updates to Satellite Navigation software relating to Freight Quality Partnership (action 5.2.2).
5.5.4	Encourage developers to provide sustainable transport facilities and links serving new developments	Encourage and facilitate uptake of sustainable modes of transport where new developments are proposed	Bromsgrove District Council, Worcestershire County Council, Worcestershire County Council	2013	2014 onwards	Greater provision of sustainable transport facilities and links servicing new developments	1%	Installation of electric vehicle charging points, or EV ready points and provision of secure cycle stores is routinely recommended by Worcestershire Regulatory Services through the planning consultation process.	Worcestershire Regulatory Services is currently working towards formalising air quality recommendations as policy with the various Worcestershire LPAs
5.3.2	Encourage car sharing	Promote car sharing services within Bromsgrove	Bromsgrove District Council, Worcestershire County Council	2015-2016	Easter 2015 onwards	Increase in number of people car sharing	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.

5.2.5	Greening Council and Business Fleets	Secure use of "cleaner" fuels/higher Euro standard vehicles for Council and Business fleets. Support bid for installation of CNG facility in Worcestershire	Bromsgrove District Council, Worcestershire County Council, Climate Change Officers	2015-2016	2016 onwards	Increase in number of Council and business fleet vehicles of higher Euro Standard and/or utilising alternative fuels	1%	Joint OLEV bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for funding to carry out feasibility studies for the installation of a compressed natural gas filling facility in Worcestershire, and three sites in Birmingham.	Steering Group supporting a joint bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for the installation of a compressed natural gas filling facility in Worcestershire.
5.2.10	Installing electric vehicle charging points	Encourage and facilitate use of electric vehicles through provision of charging points in city	Bromsgrove District Council, Worcestershire County Council	2013	2014 onwards	Increase in availability of EV charging points and corresponding increase in use of electric vehicles	1%	Installation of EV charging points are routinely recommended by WRS for inclusion on relevant planning consents to all LPAs in Worcestershire	Worcestershire Regulatory Services is currently working towards formalising air quality recommendations as policy with the various Worcestershire LPAs
5.5.3	Encourage uptake of employer and residential travel plans for major employers and new developments to area	Promotion of alternative modes of transport through organisation and personal travel planning	Bromsgrove District Council, Worcestershire County Council	2015-2016	Easter 2015 onwards	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County
5.3.1	Travel Planning	Promotion of alternative modes of transport through organisation and personal travel planning	Bromsgrove District Council, Worcestershire County Council, Climate Change Officers	2015-2016	Easter 2015 onwards	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.4.5	Raise the profile and increase awareness of air quality within the region	Publication campaign relating to air quality to publicise and raise awareness of air quality and its implications	Bromsgrove District Council, Worcestershire County Council, Climate Change Officers	2013	2014 onwards	Increased awareness at District, County and general public levels of air quality issues across the County	1%	The inception of the Air Quality Steering Group and ongoing liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general	The inception of the Air Quality Steering Group and ongoing liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the

								increase in awareness of air quality issues with the general public.	general public.
5.3.9	Smarter Choices - Choose How You Move marketing initiatives	Use of marketing and information methods to encourage use of sustainable travel modes and typically include workplace, school, residential, community, travel planning, car sharing and clubs, and awareness raising campaigns	Bromsgrove District Council, Worcestershire County Council, Climate Change Officers	2015/2016	Easter 2015 onwards	Change in behaviour towards more sustainable modes of transport.	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015
5.4.4	Make air quality information more available and accessible	WRS to make all air quality documents available to the general public for access from the website	Worcestershire Regulatory Services	2013 onwards	2013 onwards	Improved availability of air quality information. More information proactively published on website.	1%	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.
5.5.1	Produce Air Quality Supplementary Planning Document	Document providing transparent and consistent advice to development control departments and developers relating to air quality	Bromsgrove District Council, Worcestershire Regulatory Services	2014	2015 onwards	Formally adopted and utilised AQ SPD at all six LPAs across Worcestershire	1%	Development of SPD for Air Quality started and on-going	Development of SPD for Air Quality started and on-going
5.6.3	Air Quality Networks	Group of councils working in partnership to address air quality issues across those areas	Bromsgrove District Council, Worcestershire Regulatory Services	2014	2014 onwards	Improved cross boundary working between local authorities in Worcestershire	1%	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.
5.6.8	Forge closer links with local health agencies	Aiming to forge partnership with local health authorities such as Public Health England to improve knowledge and understanding of local air quality and associated health risks	Worcestershire Regulatory Services, Local Health Agencies	2015	2014 onwards	Participation of relevant health agencies in the Worcestershire Air Quality Steering Group	1%	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date.	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date.
5.3.4	Promote flexible working arrangements	Promotion of flexible working arrangements with local businesses to	Worcestershire County Council, Bromsgrove	2015-2016	Easter 2015 onwards	Increase in use of flexible working arrangements with	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South

		include working from home opportunities, staggered start times etc.	District Council, Climate Change Officers		ds	local businesses.		Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.3.8	Promote and support walking and cycling initiatives in Worcestershire	Initiative to encourage the uptake of walking and cycling by promoting the benefits using various packages such as The Chose How You Move Initiative	County Council, District Council, Climate Change Officer	2015-2016	Easter 2015 onwards	Change in behaviour to more sustainable modes of transport e.g. walking, cycling, public transport	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.

## Action Plan Progress – KIDDERMINSTER ROAD, HAGLEY AQMA

**Table 3.2.2 – Feasible Non-Progressed Non-Priority Actions to 30<sup>th</sup> July 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix but remain feasible actions to be considered in the future or as and when opportunities arise.

No.	Measure	Focus	Lead Authority	Comments
KR4	Older private bus fleet destined for local schools	Generic actions - School travel plans, bus quality partnerships,	n/a	Action not yet progressed
5.1.9	Introduce or improve feeder/merger lanes to improve flow	Feeder/merger lanes to allow traffic to enter/exit carriageway without pausing at junction.	County Council	Action not yet progressed
5.3.7	Install secure cycle parking shelters	Secure cycle parking facilities to encourage the uptake of cycling.	County Council, District Council	Action not yet progressed
5.6.4	Lobby and support government to subsidise public	Encourage use of public transport by making more available, efficient	District Council, County	Action not yet progressed

	transport	and cheaper.	Council	
5.3.6	Improve cycling and walking routes in local areas	Encourage comprehensive walking and cycling networks to compliment existing routes and integrating local transport hubs.	County Council, District Council	Action not yet progressed
5.6.6	Lobby and support government to adopt policies to carry out nationally targeted green transport initiatives	Encourage uptake of sustainable modes of transport through green transport initiatives	District Council, County Council	Action not yet progressed
5.2.1	Bus Quality Partnership	Working with bus partnerships to lower emissions	District Council, County Council, Bus Operators	County Council no longer manages any bus fleet other than school buses, all operators are now private companies
5.6.7	Removal of receptors from air quality management areas	Purchase of houses and removal of receptors from their homes	District Council , County Council	Action not yet progressed
5.2.4	Railway Enhancements	Improvements to rail services to encourage patronage. Addition improvements to railway station may include cycle stores, footpath lighting, variable message signage and integrated bus services	County Council, District Council, Network Rail	Action not yet progressed
5.3.3	Promote teleconferencing and encourage uptake	Encouragement of business to use flexible working arrangements and technologies	County Council, District Council, Climate Change officers	Action not yet progressed
5.1.7	Improvement of signage for traffic to avoid AQMA	Encourage strategic traffic to avoid travelling through the AQMA and find alternative routes	County Highways	Action not yet progressed
5.2.11	Roadside emissions testing	Undertaking roadside emissions testing to target worst polluting vehicles and issues fines under Regulations	District Council	Action not yet progressed
5.6.1	Air quality policies in Local Development Plans	Air quality built into local development plans via consultation	County Council, District Council	Action not yet progressed
5.5.2	Formula for s106 (or CIL) contribution towards mitigation measures and programmes	Gain S106 monies from developers for development impacting AQMAs or air quality that can be used towards mitigation measures and air quality improvements	District Councils	Action not yet progressed
5.6.5	Lobby and support government to ensure the manufacture and use of cleaner vehicles and fuels	Lobbying government to further ensure development of greener vehicles and fuels through policy changes, new initiatives and funding opportunities	County Council, District Council	Action not yet progressed
5.6.9	Development of a Low Emission Strategy for Worcestershire			Action not yet progressed
5.4.2	Provide link to real time air quality information	Live and available air quality information	District Council	Action not yet progressed
5.6.2	Influence Climate Change Strategy actions	Encourage strategies for improving climate change and local air quality	Climate Change Groups, District Council, County Council	Action not yet progressed
5.1.3	HGV or weight restriction on affected roads	Encourage HGVs to avoid AQMA and find alternative routes	County Council	Action not yet progressed
5.1.5	Loading and unloading restrictions during peak traffic times	Restrictions are already in place but further enforcement believed to improve traffic flow with AQMA.	District Council	Action not yet progressed
5.2.3	Park and Ride Schemes	Provision of out of town car park for operation of park and ride bus service	District Council , County Council	Action not yet progressed
5.2.7	Introduce fixed penalty notices for stationary idling	Enforce penalty notices for parked drivers who refuse to turn off engines	District Council	Action not yet progressed
5.2.8	Introduce differential parking rates - engines	Different rates of parking depending on factors such as engine size, emissions	District Council, County Council	Action not yet progressed
5.2.9	Introducing differential parking rates - air quality	Parking rates linked to times of poor air quality or special events to	District Council, County	Action not yet progressed

	event	encourage uptake of park and ride facilities	Council	
5.2.12	Signage identifying AQMA	Signs at various locations within or adjacent to the AQMA to encourage behavioural changes of drivers	County Council, District Council	Action not yet progressed
5.2.13	Tree Planting	Planting of green infrastructure in a bid to mitigate pollutants - no evidence of having significant impact within AQMAS	District Council, County Council	Action not yet progressed
5.3.5	Workplace parking charging schemes	Promote charging schemes to discourage single occupancy car journeys and encourage take up of sustainable alternatives (car sharing, cycling, walking, public transport)	District Council, County Council	Action not yet progressed
5.3.10	Car Clubs	Pool ownership of cars for members use	County Council, District Council	Action not yet progressed
5.4.1	Smarter Driving Tips	The introduction of environmentally conscious driving techniques and optimal vehicle operation (includes factors such as driving behaviour, tyre type and pressure, and speed management)	County Council, District Council, Climate Change officers	Action not yet progressed
5.4.3	Establish an Air Quality Alert System	Free information service about air pollution and related health advice to individuals with health concerns made worse by poor air quality	County Council, District Council	Action not yet progressed
KR2	Current boundary of AQMA requires amendment to conform with best practice guidance	Amend boundary following future dispersion modelling if revocation not appropriate	WRS, District Council	Action not yet progressed
KR3	Large proportion of single occupancy vehicles	Refer to generic actions - Travel Plans, High Occupancy Vehicle Lanes, Car Sharing, Smarter Choices Measure Package	n/a	Action not yet progressed
KR6	AQO only exceeded at a few properties	Mitigation actions should be proportionate - all generic actions	n/a	Action not yet progressed
KR7	HGVs largest source	Generic actions - Freight Quality Partnership, utilising variable message signage	n/a	Action not yet progressed
KR8	Long term local trend data indicates only three exceedances have been recorded in the last 7 years	Targeted monitoring of existing and new locations and analysis to continue	WRS, district council	Action not yet progressed
5.1.6	Priority bus and high occupancy vehicle (HOV) lanes and corridors	Restricting parts of carriageway to priority vehicles	County Council, District Council	Action not yet progressed
5.1.2	Change carriageway from two ways to one way. Consider inclusion of dedicated bus lane/cycle lane etc.	Maximising efficiency of roadway	County Council, District Council	Action not yet progressed
5.1.10	Pedestrianisation of streets within area	Complete pedestrianisation and removal of emissions	County Council, District Council	Action not yet progressed
5.1.14	Traffic calming measures (aim is to deter drivers using route)	Employ speed bumps or other measures to deter traffic from using the route	County Council	Action not yet progressed
5.5.5	Compulsory Purchase Schemes	Effectively removing residential exposure by using compulsory purchase orders	County Council, District Council	Action not yet progressed

## Action Plan Progress – KIDDERMINSTER ROAD, HAGLEY AQMA

**Table 3.2.3 Non-Feasible Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix and have been discounted as unfeasible for the Kidderminster Road AQMA following further consideration. These actions will not be reported on in the future.

No	Measure	Focus	Reasons Why Action Not Feasible
5.1.11	Remove build-out in streets to allow cars to pass simultaneously	Removing traffic calming measures or excessive pavement areas would increase road width and ease two way traffic flow	No areas requiring attention within the Hagley AQMA.
5.1.12	Removal of parking bays in affected streets	Removal of parking bays in problem areas to increase road widths. To be undertaken with consideration to other alternatives for parking.	There are no identified parking bays within the Hagley AQMA.
5.1.13	Alterations to parking provision and pricing (may result in decrease car use and increase uptake of public transport)	Increasing price to park to deter car journeys or sign post to cheaper more strategic alternatives	No local car parks affecting the AQMA.
KR1	Conjunction of busy A456 and A491 roads	Not feasible to change	Not a specific identified action that is feasible to change.



### 3.3 Horsefair Sub-Group Progress

The Horsefair, Kidderminster sub-group currently comprises four members, including two representatives from WRS, one dual district and county councillor and the formal Worcestershire County Council air quality liaison officer.

The following five priority actions were identified by WRS for the Horsefair AQMA following the use of the prioritisation matrix and following further discussion with Worcestershire County Council:

- 5.1.5 Loading and unloading restrictions during peak traffic times
- 5.3.4 Promote flexible working arrangements
- 5.2.2 Freight Quality Partnership
- 5.1.1 Alteration to phasing of traffic light systems
- 5.1.8 Introduction of traffic signals at roundabouts

Progress with the implementation of these actions to date is detailed in the tables below.

The following schemes for improving air quality by limiting idling/stationary traffic within the AQMA and enhancing accessibility to all modes of transport were identified by the Worcestershire County Council technical discussion paper for the Horsefair AQMA:

1. Development and promotion of the Churchfields Masterplan, which encompasses the Horsefair AQMA, including its proposed signalisation of the Blackwell Street junction and improvement of pedestrian/cycling crossing facilities over the Kidderminster Ringway.
2. Promotion of a major scheme to improve the efficiency of the Kidderminster Ringway including conversion and upgrade of all roundabouts in favour of linked, signalised junctions.
3. Supporting opportunities for redevelopment and further landscaping of the central area of Kidderminster to improve attractiveness and utility of the town centre.

In general progress with the implementation of all identified options is detailed in the tables below. However, a short summary of significant progress is provided below for clarity.

The consensus of the sub-group is to progress the implementation of the identified priority actions through engagement with, and support of, the Churchfields Master Plan and plans coming forward as part of the Kidderminster Transport Strategy for the overhaul of the Kidderminster Ringway system. This approach is considered to be the most effective mechanism to progress the priority actions and access funding.

The Churchfields Master Plan identifies the presence of the Horsefair AQMA and the congested nature of the highway network in that area. The Master Plan identifies improving access, movement and permeability of the whole area as one of the key themes of the document. It identifies that development will need to open up the access to the site and allow better connections to, and within, the Master Plan area and provides detail of provision of a new access point from the Kidderminster Ringway. Wyre Forest District Council is working closely with Worcestershire County Council to improve access to Churchfields and Horsefair area for motorised modes of transport from adjacent areas.

With regard to the overhaul of the Kidderminster Ringway Worcestershire County Council has, in 2014/2015, developed a Wyre Forest Transport Model (WFTM) for the purposes of strategic modelling of the highway network in the Wyre Forest area. Validation of the model is now nearing completion. Using the model it is proposed to develop a Kidderminster Transport Strategy which will involve a series of phases of work, one of which will involve the comprehensive re-engineering of the Kidderminster Ringway to balance traffic flow with improving accessibility for non-car modes of transport. This will include extensive landscaping to improve the attractiveness of the town centre. The Horsefair AQMA is intrinsically linked to the Kidderminster Ringway with the vast majority of traffic travelling through the AQMA doing so either from or towards the Kidderminster Ringway. By improving the efficiency of the Ringway whilst simultaneously encouraging travel to the town centre via alternative modes it is envisaged that levels of congestion within the AQMA will

reduce in combination with improvements in flow of traffic. This should result in a significant improvement in air quality.

Details of progress made with all identified actions are detailed in the tables below. The actions are produced across three tables splitting actions into groups covering feasible actions where progress has been made, feasible actions where no progress has been made and non-feasible actions that will not be considered further.

## Action Plan Progress – HORSEFAIR, KIDDERMINSTER AQMA

Table 3.3.1 – Progressed Actions to 30<sup>th</sup> April 2015

No.	Measure	Focus	Lead Authority	Planni ng Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in AQMA	Progress to Date	Progress in Last 12 Months
5.1.5	Loading and unloading restrictions during peak traffic times	Loading and unloading of vehicles is a frequent issue which results in congestion. Variable loading and unloading restrictions exist but are under enforced.	Worcestershire County Council, Wyre Forest District Council	2015	2016	Increase in number fixed penalty notices served. Reduction in number non-permitted loading/unloading incidents. Reduced congestion.	2-5%	Highways to develop an AQMA specific technical discussion paper to set the AQMAs in the context of transport-specific issues and constraints, planned development growth, local demographics and economic profiling as well as current and proposed highway schemes. This document should provide a solid base from which to progress.	Following production of the Highways technical discussion paper consensus that action should be pursued with relevant councillors and through engagement with the Churchfields Master Plan. To date we have been unsuccessful in securing a meeting with the relevant district and county councillor. No further action taken.
5.3.4	Promote flexible working arrangements	Promotion of flexible working arrangements with local businesses to include working from home opportunities, staggered start times etc.	Worcestershire County Council, Wyre Forest District Council	2014-2015	Easter 2015	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in AQMA	Progress to Date	Progress in Last 12 Months
5.2.2	Freight Quality Partnership (work with sat nav providers)	Encourage freight vehicles to avoid AQMA and find alternative routes through work with sat nav data providers to ensure freight is routinely routed around AQMA	Worcestershire County Council	2015	2016 onwards	Significant reduction of strategic freight diverted away from AQMA.	5-40%	Steering Group identified that use of Worcestershire County Council Lorry Route Advisory Map has declined significantly in recent years due to now almost universal use of sat nav systems. Group agree should focus on working with sat nav data providers to ensure that HGVs are routinely routed around AQMAs.	Steering Group identified that use of Worcestershire County Council Lorry Route Advisory Map has declined significantly in recent years due to now almost universal use of sat nav systems. Group agree should focus on working with sat nav data providers to ensure that HGVs are routinely routed around AQMAs.
5.1.1	Alteration to phasing of traffic light systems	Aim to improve flow of traffic by optimising traffic signal systems throughout the AQMA. Action will form part of wider Kidderminster improvement scheme which will see significant alterations to the Kidderminster Ringway. Linked to the current Churchfields Master Plan.	Worcestershire County Council	2015-2017	currently unknown	Improved flow through AQMA, reduction in congestion	10-40%	County Highways technical discussion paper received and reviewed. Paper identified wider proposals and plans for the Kidderminster area including the Churchfields Master Plan and wider scheme for the improvement of roundabouts along the Kidderminster Ringway and use of signalised systems to allow micromanagement of traffic flows within and around the AQMA. Worcestershire County Council has developed a multi-modal model for Wyre Forest. Validation of this model is nearing completion. The model will be used to develop a Kidderminster Transport Plan which will include proposals for re-engineering of the Ringway.	County Highways technical discussion paper received and reviewed. Paper identified wider proposals and plans for the Kidderminster area including the Churchfields Master Plan and wider scheme for the improvement of roundabouts along the Kidderminster Ringway and use of signalised systems to allow micromanagement of traffic flows within and around the AQMA. Worcestershire County Council has developed a multi-modal model for Wyre Forest. Validation of this model is nearing completion. The model will be used to develop a Kidderminster Transport Plan which will include proposals for re-engineering of the Ringway.

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in AQMA	Progress to Date	Progress in Last 12 Months
5.1.8	Introduction of traffic signals at roundabouts	Promotion of a major scheme to improve the efficiency of the Kidderminster Ringway including conversion and removal of all roundabouts in favour of linked, signalised junctions	Worcestershire County Council	2016-2018	2018 onwards	Improved flow around ring road, significant reduction in stationary idling traffic at peak times.	10-40%	County Highways technical discussion paper received and reviewed. Paper identified wider proposals and plans for the Kidderminster area including the Churchfields Master Plan and wider scheme for the improvement of roundabouts along the Kidderminster Ringway and use of signalised systems to allow micromanagement of traffic flows within and around the AQMA. Worcestershire County Council has developed a multi-modal model for Wyre Forest. Validation of this model is nearing completion. The model will be used to develop a Kidderminster Transport Plan which will include proposals for re-engineering of the Ringway.	County Highways technical discussion paper received and reviewed. Paper identified wider proposals and plans for the Kidderminster area including the Churchfields Master Plan and wider scheme for the improvement of roundabouts along the Kidderminster Ringway and use of signalised systems to allow micromanagement of traffic flows within and around the AQMA. Worcestershire County Council has developed a multi-modal model for Wyre Forest. Validation of this model is nearing completion. The model will be used to develop a Kidderminster Transport Plan which will include proposals for re-engineering of the Ringway.
5.2.5	Greening Council and Business Fleets	Secure use of "cleaner" fuels/higher Euro standard vehicles for Council and Business fleets. Support bid for installation of CNG facility in Worcestershire	Worcestershire County Council, in combination with Wyre Forest District Council.	2015-2016	2016 onwards	Increase in number of Council and business fleet vehicles of higher Euro Standard and/or utilising alternative fuels	<1%	Proposals for joint bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for the installation of a compressed natural gas filling facility in Worcestershire. Although not specifically applicable to WFDC such a facility may offer the opportunity for improvements to other Districts.	Proposals for joint bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for the installation of a compressed natural gas filling facility in Worcestershire. Although not specifically applicable to WFDC such a facility may offer the opportunity for improvements to other Districts.

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in AQMA	Progress to Date	Progress in Last 12 Months
5.3.2	Encourage car sharing	Promote development and use of car sharing through potential County-wide personal travel planning service	Worcestershire County Council	2014-2015	Easter 2015 onwards.	Increase in number of people car sharing	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.2.10	Installing electric vehicle charging points	Encourage and facilitate use of electric vehicles through increased provision of charging points	Wyre Forest District Council, Worcestershire County Council	2013	2014 onwards	Increase in availability of EV charging points and corresponding increase in use of electric vehicles	1.50%	Installation of EV charging points are routinely recommended by WRS for inclusion on relevant planning consents to all LPAs in Worcestershire.	Worcestershire Regulatory Services is currently working towards formalising air quality recommendations as policy with the various Worcestershire LPAs

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in AQMA	Progress to Date	Progress in Last 12 Months
5.3.9	Smarter Choices - Choose How You Move marketing initiatives	Promotion of alternative modes of transport through organisation and personal travel planning	Worcestershire County Council, in combination with Wyre Forest District Council.	currently unknown	currently unknown	Change in behaviour towards more sustainable modes of transport.	<1%	More recently Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council advise that Kidderminster will be the next population centre to get Choose How You Move.	More recently Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council advise that Kidderminster will be the next population centre to get Choose How You Move.
5.5.3	Encourage uptake of employer and residential travel plans for major employers and new developments to area	Promotion of alternative modes of transport through organisation and personal travel planning	Worcestershire County Council, Wyre Forest District Council	2015-2016	Easter 2015 onwards.	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.



No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in AQMA	Progress to Date	Progress in Last 12 Months
5.3.1	Travel Planning	Promotion of alternative modes of transport through business and personal travel planning	Worcestershire County Council	2014-2015	Easter 2015 onwards.	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.4.5	Raise the profile and increase awareness of air quality within the region	Raise the profile and increase awareness of air quality within the region	Worcestershire County Council, District Councils	2013	2014 onwards	Increased awareness at District, County and general public levels of air quality issues across the County	<1%	The inception of the Air Quality Steering Group and ongoing liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the general public.	The inception of the Air Quality Steering Group and ongoing liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the general public.

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in AQMA	Progress to Date	Progress in Last 12 Months
5.5.4	Encourage developers to provide sustainable transport facilities and links serving new developments	Encourage and facilitate uptake of sustainable modes of transport where new developments are proposed	Wyre Forest District Council, Worcestershire County Council	2013	2014 onwards	Greater provision of sustainable transport facilities and links servicing new developments	<1%	Installation of electric vehicle charging points, or EV ready points and provision of secure cycle stores is routinely recommended by Worcestershire Regulatory Services through the planning consultation process. In addition Worcestershire County Council are rolling out a personalised travel planning service to new developments from Easter 2015	Installation of electric vehicle charging points, or EV ready points and provision of secure cycle stores is routinely recommended by Worcestershire Regulatory Services through the planning consultation process. In addition Worcestershire County Council are rolling out a personalised travel planning service to new developments from Easter 2015
5.4.4	Make air quality information more available and accessible	Proactive publication of information on WRS website	WRS	2013 onwards	2013 onwards	Improved availability of air quality information. More information proactively published on website.	<1%	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.
5.5.1	Produce Air Quality Supplementary Planning Document	Provide consistent approach to planning application and mitigation through production and adoption of Supplementary Planning Document for Air Quality	WRS	2014	2015 onwards	Aim for AQ SPD to be formally adopted and utilised at all six LPAs across Worcestershire	<1%	Development of SPD for Air Quality started and on-going	Development of SPD for Air Quality started and on-going

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in AQMA	Progress to Date	Progress in Last 12 Months
5.6.3	Air Quality Networks	Collaboration between networks of neighbouring local authorities to tackle air quality in their area	District Councils, WRS	2014	2014 onwards	Improved cross boundary working between local authorities in Worcestershire	<1%	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.
5.6.8	Forge closer links with local health agencies	Improve relationships with health agencies to ensure public health aspect of air quality continues to be relevant	Wyre Forest District Council, WRS	2014	2014 onwards	Participation of relevant health agencies in the Worcestershire Air Quality Steering Group	<1%	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date.	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date.
5.3.8	Promote and support walking and cycling initiatives in Worcestershire	Initiative to encourage the uptake of walking and cycling by promoting the benefits using various packages such as The Chose How You Move initiative	County Council, District Council, Climate Change Officer	2015-2016	Easter 2015 onwards	Change in behaviour to more sustainable modes of transport e.g. walking, cycling, public transport	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.

## Action Plan Progress – HORSEFAIR, KIDDERMINSTER AQMA

**Table 3.3.2 – Feasible Non-Progressed Non-Priority Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix but remain feasible actions to be considered in the future or as and when opportunities arise.

No.	Measure	Focus	Lead Authority	Comments
5.2.1	Bus Quality Partnership	Improve emission standards of buses using AQMA via voluntary bus quality partnership agreement.	County Council, District Council, Bus Operators	
5.2.6	Low Emission Zones	Introduction of a low emission zone for vehicles using the Horsefair AQMA	County Council, District Council	
5.1.2/HF5	Change carriageway from two ways to one way. Consider inclusion of dedicated bus lane/cycle lane etc.	Change carriageway from two ways to one way. Consider inclusion of dedicated bus lane/cycle lane etc.	County council	Likely not feasible due to configuration of local highway network but not yet fully assessed.
5.6.6	Lobby and support government to adopt policies to carry out nationally targeted green transport initiatives	Encourage uptake of sustainable modes of transport through green transport initiatives	District Council, County Council	
5.2.9	Introducing differential parking rates - air quality event	Discourage people from driving in to the city during times of poor air quality by introducing variable parking rates that are much higher during a poor air quality event	County Council, District Council	
5.1.10	Pedestrianisation of streets within area	Eliminate vehicle emissions from area by preventing vehicular access (with delivery vehicle etc. exemptions)	County Council, District Council	Likely not feasible due to configuration of local highway network but not yet fully assessed.
5.3.7	Install secure cycle parking shelters	Encourage cycling as a mode of transport into the city centre	County Council	
5.6.9	Development of a Low Emission Strategy for Worcestershire	Development and implementation of low emission strategy to contain a variety of strategies aimed at reducing emissions.	County Council, District Council	
5.2.3	Park and Ride Schemes	Introduction of park and ride schemes to encourage people not to drive in to the town centre	District Council	
5.3.6	Improve cycling and walking routes in local areas	Encourage use of cycling and walking routes by improving provision and quality	County Council	
5.6.7	Removal of receptors from air quality	Remove residential housing from area therefore effectively	County Council, District Council	

	management areas	removing sensitive receptors		Likely not feasible but yet to be fully assessed.
5.1.3	HGV or weight restriction on affected roads	Reduce volume of HGVs in area by introducing and/or enforcing weight restriction TROs	County Council, District Council	
5.3.5	Workplace parking charging schemes	Discourage workers from driving to city centre places of work by introducing car park charging schemes for workplaces	District Council, County Council, Local business	
5.6.4	Lobby and support government to subsidise public transport	Encourage use of public transport by making it cheaper and therefore more attractive	County Council, District Council	
5.3.3	Promote teleconferencing and encourage uptake	Promote teleconferencing and encourage uptake	District Council, County Council	
5.2.11	Roadside emissions testing	Improve emissions by spot testing vehicles at the roadside in joint operations with VOSA and the Police	District Council	
5.6.1	Air quality policies in Local Development Plans	Link air quality policies to local development plans	District Council	Will be progresses as and when consultation opportunities relating to Local Development Plans arise.
5.5.2	Formula for s106 (or CIL) contribution towards mitigation measures and programmes	Development of consistent formula for calculating s106 or CIL contributions from developers (damage costs)	District Council	
5.6.5	Lobby and support government to ensure the manufacture and use of cleaner vehicles and fuels	Lobby and support government to ensure the manufacture and use of cleaner vehicles and fuels	County Council, District Council	
5.6.2	Influence Climate Change Strategy actions	There is a strong link between climate change strategy and air quality. Acknowledge this link by feeding air quality into climate change strategy	District Council	Will be progresses as and when consultation opportunities relating to Climate Change Strategies arise.
5.1.4	Variable Message Signage (includes traffic info, car park info, bus and rail connection info etc.) Could be used in combination with Park and Ride schemes etc.	Use of VMS to encourage use of alternative modes of transport, directly drivers to car parks with free spaces etc.	County Council, District Council	
5.4.2	Provide link to real time air quality information	Provision of air quality info and health advice to vulnerable groups/individuals	District Council	
5.1.7	Improvement of signage for traffic to avoid AQMA	Encourage strategic traffic to avoid travelling through the AQMA and directing traffic via other routes	County Highways	
5.1.11	Remove build-out in streets to allow cars to pass simultaneously	Remove build-out in streets to allow cars to pass simultaneously	County Council	
5.1.12	Removal of parking bays in affected streets	Improve flow by removing any existing parking bays	County Council	
5.1.14	Traffic calming measures (aim is to deter drivers using route)	Discourage drivers from using the route	County Council	
5.2.4	Railway Enhancements	Improvements to existing services and stations.	County Council, District Council, Network Rail	
5.2.7	Introduce fixed penalty notices for stationary idling	Discourage stationary idling	District Council, County Council	
5.2.8	Introduce differential parking rates - engines	Encourage drivers of higher emission vehicles from driving in to city centre	District Council, County Council	

5.2.12	Signage identifying AQMA	Encourage strategic traffic to avoid travelling through the AQMA and directing traffic via other routes by advertising location of the AQMA on signage	County Highways	
5.3.10	Car Clubs	Promotion of alternative modes of transport through organisation and personal travel planning	County Council, District Council	
5.4.1	Smarter Driving Tips	Reduce emissions through driver education	County Council, District Council	
5.4.3	Establish an Air Quality Alert System	Provision of air quality info and health advice directly to vulnerable groups/individuals	District Council	
5.5.5	Compulsory Purchase Schemes	Removal of receptors and/or street canyon through compulsory purchase of property.	District Council	Likely not feasible but yet to be fully assessed.
HF2	Current boundary of AQMA requires amendment to conform with best practice guidance	Current boundary of AQMA requires amendment to conform with best practice guidance	WRS	
5.1.6	Priority bus and high occupancy vehicle (HOV) lanes and corridors	Encourage bus use and car sharing by providing priority lanes for such vehicles	County Council, District Council	Likely not feasible due to confined space in parts of the AQMA but yet to be fully assessed.
5.1.9	Introduce or improve feeder/merger lanes to improve flow	Action is not feasible for AQMA and therefore will not be progressed further	County Council	Likely not feasible due to confined space in parts of the AQMA but yet to be fully assessed.

## Action Plan Progress – HORESFAIR, KIDDERMINSTER AQMA

### Table 3.3.3 – Non-Feasible Actions to 30<sup>th</sup> April 2015

These actions were not identified as priority actions following completion of the prioritisation matrix and have been discounted as unfeasible for the Horsefair AQMA following further consideration. These actions will not be reported on in the future.

No	Measure	Focus	Reasons Why Action Not Feasible
HF4	Blackwell Street canyon	Presence of street canyon contributes to elevated NO2 levels within AQMA.	Noted – Blackwell Street canyon is key element to AQMA. Action is an observation rather than a tangible action.
5.2.13	Tree Planting	Provision of trees to provide physical barrier or attenuation of particulate matter	Not feasible due to confirmed spaces within AQMA. Little evidence to demonstrate tree planting is effective with regard to reducing NO2.
HF3	Main issue is volume of traffic entering and exiting ring road	High volume of traffic through AQMA contributes significantly to congestion and elevated NO2 within AQMA.	Noted – linked to other actions above relating to reduction in volume of traffic through AQMA and improvements to flow of traffic within and around AQMA. Action is an observation rather than a tangible action.
HF6	There are two local schools in vicinity of AQMA	School traffic contributes to high traffic volume in area and to elevated NO2 within AQMA	Noted – linked to other actions above relating to travel planning, promotion of alternative modes of transport etc. Action is an observation rather than a tangible action.



### **3.4 Port Street, Evesham Sub-Group Progress**

The Port Street, Evesham sub-group currently comprises six members, including two representatives from WRS, two district councillors, one county councillor and the formal Worcestershire County Council air quality liaison officer.

The group met with the wider steering group on 18th June 2014 and then again as a sub-group on site on 13th January 2015.

The following five priority actions were identified by WRS for the Port Street AQMA following the use of the prioritisation matrix:

- 5.1.1 Alteration to phasing of traffic light systems/removal of signals at Waterside junction
- 5.1.8 Introduction of signals at roundabouts
- 5.2.1 Bus quality partnership
- 5.1.5 Loading and unloading restrictions during peak traffic times
- PS11 Review of data to ensure AQMA is still relevant

Progress with the implementation of these actions to date is detailed in Table 3.4.1 below.

The following schemes for improving air quality were identified by the Worcestershire County Council technical discussion paper for the Port Street AQMA:

- 1 Re-design of signalised junction with Waterside and Workman Bridge to remove signals and install alternative, such as mini-roundabout to minimise idling traffic along the AQMA.
- 2 Review of the pedestrian crossings within the AQMA to consider use of intelligent systems that communicate with one another to ensure flow of traffic along the AQMA or consider removal of the pedestrian crossings in favour of informal crossing together with reduced speed limit.



- 3 Signalisation of the existing “Lidl” roundabout. The signalised system permits free flow of traffic into the AQMA. Consider signalisation of the junction to hold traffic back outside of AQMA and prevent queuing in the AQMA.

In general progress with the implementation of all identified options is detailed in tables below. However, a short summary of significant progress is provided below for clarity.

WRS have undertaken a review of existing data for the Port Street AQMA as per priority action PS11 and determined that the AQMA is still relevant and should remain in place.

At the sub-group meeting on 13th January 2015 the various priority actions and options outlined above were discussed. There was general support from councillors regarding options 5.1.1, 5.1.5, 1 and 2 above. Options 5.18 and 3 were felt to be “too much” for local residents and it was suggested there was little public support for such a scheme. Therefore these options have not been progressed further to date, however the option for further consideration of these in the future remains in place.

In February 2015 Worcestershire County Council obtained a transport model for the area and completed modelling of the various scenarios. Following this a scheme for implementation has been agreed and funding secured for the removal of the traffic signals at the Waterside and Workman Bridge junction. A trial of the signal removal (involving bagging of the existing signals) has been agreed and will commence shortly. It is envisaged that, depending on the success of the trial, work to remove the signals and remodel the junction will commence and be completed in 2016. It is envisaged that the removal of the signals will reduce the volume of traffic held inside the AQMA and will improve the flow of traffic.

WRS has estimated that this will result in a 5-10% reduction in emissions. It is estimated that an overall 10% reduction in emissions is likely to be required to allow for revocation of the AQMA.

Details of progress made with all identified actions are detailed in the tables below. The actions are produced across three tables splitting actions into groups covering feasible actions where progress has been made, feasible actions where no progress has been made and non-feasible actions that will not be considered further.

## Action Plan Progress – PORT STREET, EVESHAM AQMA

Table 3.4.1 – Progressed Actions to 30<sup>th</sup> April 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.1.8	Introduction of signals at roundabouts.	Signalisation of Lidl roundabout.	Worcestershire County Council	medium term	medium term	Control of vehicle cohort travelling along Port Street, reduction of queuing in the Port Street street canyon	5-10%	Transport model obtained and modelling of the various scenarios commenced. All interested parties invited to participate in Steering Group, those in attendance agree with proposals going forward. Worcestershire County Council confirm that plans to introduce signals at Lidl roundabout have been formally adopted in the South Worcestershire Development Plan	Transport model obtained and modelling of the various scenarios commenced. All interested parties invited to participate in Steering Group, those in attendance agree with proposals going forward. Worcestershire County Council confirm that plans to introduce signals at Lidl roundabout have been formally adopted in the South Worcestershire Development Plan
5.1.1	Removal of signals at Port Street/Waterside Junction	Removal of signals at junction to improve flow and reduce volume of traffic held inside AQMA. Signals to be replaced with mini-roundabout or T-junction	Worcestershire County Council	2014-2015	2015-2016	Reduction in monitored NO2 such that AQMA can be revoked.	5-10%	Transport model obtained and modelling of the various scenarios commenced. All interested parties invited to participate in Steering Group, those in attendance agree with proposals going forward. Worcestershire County Council advise funding secured. As of Feb 2015 modelling completed and scheme for trial agreed. Trial to start and complete in 2015. Funding secured.	Transport model obtained and modelling of the various scenarios completed. All interested parties invited to participate in Steering Group, those in attendance agree with proposals going forward. Worcestershire County Council advise funding secured. As of Feb 2015 modelling completed and scheme for trial agreed. Trial to start and complete in 2015.
PS5	Improvement to pedestrian crossing management.	Upgrade pedestrian crossings to provide intelligent system.	Worcestershire County Council	medium term	medium term	Vehicles will not be held at two separate crossings along the street canyon. The two crossings will be linked and have synchronised green phases.	2%	Transport model obtained and modelling of the various scenarios commenced. All interested parties invited to participate in Steering Group, those in attendance agree with proposals going forward. Worcestershire County Council confirm that plans to improve pedestrian crossing have been formally adopted in South Worcestershire Development Plan	Transport model obtained and modelling of the various scenarios commenced. All interested parties invited to participate in Steering Group, those in attendance agree with proposals going forward. Worcestershire County Council confirm that plans to improve pedestrian crossing have been formally adopted in South Worcestershire Development Plan

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.2.1	Bus Quality Partnership	Reduce bus related emissions in AQMA through use of Bus Quality Partnerships (BQP) with local operators. Port Street is a primary bus route in and out of the city centre and as such bus contribution to emissions is high	Wychavon District Council, bus service operators (First Group, Red Diamond etc)	2018 if required	currently unknown	Elimination of lower Euro standard buses (which Euro Standards to be agreed should political support for such an action be secured) by as yet unknown date.	1%	Steering Group members agree that wider Port Street highway improvement scheme will result in revocation of AQMA. Therefore resources not currently allocated for planning and implementation of BQP.	Steering Group members agree that wider Port Street highway improvement scheme will result in revocation of AQMA. Therefore resources not currently allocated for planning and implementation of BQP.
5.1.5/PS7	Loading and unloading restrictions during peak traffic times	Loading and unloading of vehicles is a frequent issue which results in congestion. Variable loading and unloading restrictions exist but are under enforced.	Wychavon District Council	2015	2016 onwards	Fewer incidents of loading and unloading resulting in congestion due to increased enforcement. Potential increase in number of fixed penalty notices served.	1-3%	Steering Group members agree that current enforcement of existing loading and unloading restrictions is not effective. Steering Group members to pursue improvements with Wychavon District Council. It is acknowledged that resource constraints at the District Council will affect the success of this action. Steering group to pursue more consistent loading and unloading restrictions as they are currently varied along the affected stretch of Port Street	Steering Group members agree that current enforcement of existing loading and unloading restrictions is not effective. Steering Group members to pursue improvements with Wychavon District Council. It is acknowledged that resource constraints at the District Council will affect the success of this action. Steering group to pursue more consistent loading and unloading restrictions as they are currently varied along the affected stretch of Port Street
PS11	Initial review of data indicates fewer exceedences than previously indicated	WRS to review long-term trend data to determine whether previous assessments have conclude more exceedences of the annual mean objective than have actually been measured	WRS	2014	2014	N/A	N/A	WRS undertook initial data review and concluded that the AQMA remains necessary. WRS and sub-group members concluded no benefit to be had from reviewing long-term trend data in fine detail, therefore no further action required.	WRS undertook initial data review and concluded that the AQMA remains necessary. WRS and sub-group members concluded no benefit to be had from reviewing long-term trend data in fine detail, therefore no further action required.

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.2.2	Freight Quality Partnership (work with sat nav providers)	Encourage freight vehicles to avoid AQMA and find alternative routes through work with sat nav data providers to ensure freight is routinely routed around AQMA	Worcestershire County Council	2015	2016 onwards	Significant reduction of strategic freight diverted away from AQMA.	5-10%	Steering Group identified that use of Worcestershire County Council Lorry Route Advisory Map has declined significantly in recent years due to now almost universal use of sat nav systems. Group agree should focus on working with sat nav data providers to ensure that HGVs are routinely routed around AQMAs.	Steering Group identified that use of Worcestershire County Council Lorry Route Advisory Map has declined significantly in recent years due to now almost universal use of sat nav systems. Group agree should focus on working with sat nav data providers to ensure that HGVs are routinely routed around AQMAs.
5.5.4	Encourage developers to provide sustainable transport facilities and links serving new developments	Encourage and facilitate uptake of sustainable modes of transport where new developments are proposed	Wychavon District Council, Worcestershire County Council	2013	2014 onwards	Greater provision of sustainable transport facilities and links servicing new developments	<1%	Installation of electric vehicle charging points, or EV ready points and provision of secure cycle stores is routinely recommended by Worcestershire Regulatory Services through the planning consultation process. In addition Worcestershire County Council are rolling out a personalised travel planning service to new developments from Easter 2015	Installation of electric vehicle charging points, or EV ready points and provision of secure cycle stores is routinely recommended by Worcestershire Regulatory Services through the planning consultation process. In addition Worcestershire County Council are rolling out a personalised travel planning service to new developments from Easter 2015
5.3.9	Smarter Choices - Choose How You Move marketing initiatives	Promotion of alternative modes of transport through organisation and personal travel planning	Worcestershire County Council, in combination with Wychavon District Council.	Currently unknown	currently unknown	Change in behaviour towards more sustainable modes of transport.	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.2.5	Greening Council and Business Fleets	Secure use of "cleaner" fuels/higher Euro standard vehicles for Council and Business fleets. Support bid for installation of CNG facility in Worcestershire	Worcestershire County Council, in combination with the District Councils	2015-2016	2016 onwards	Increase in number of Council and business fleet vehicles of higher Euro Standard and/or utilising alternative fuels	<1%	Joint OLEV bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for funding to carry out feasibility studies for the installation of a compressed natural gas filling facility in Worcestershire, and three sites in Birmingham.	Although not specifically relevant to the Wychavon District it is considered development of such a network would offer opportunity for improvements in the wider area.
5.3.2	Encourage car sharing	Promote development and use of car sharing through potential County-wide personal travel planning service	Worcestershire County Council	2014-2015	Easter 2015 onwards.	Increase in number of people car sharing	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015
5.2.10	Installing electric vehicle charging points	Encourage and facilitate use of electric vehicles through increased provision of charging points	Wychavon District Council, Worcestershire County Council	2013	2014 onwards	Increase in availability of EV charging points and corresponding increase in use of electric vehicles	1.50%	Installation of EV charging points are routinely recommended by WRS for inclusion on relevant planning consents to all LPAs in Worcestershire. .	Worcestershire Regulatory Services is currently working towards formalising air quality recommendations as policy with the various Worcestershire LPAs

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.4.5	Raise the profile and increase awareness of air quality within the region	Raise the profile and increase awareness of air quality within the region	Wychavon District Council, Worcestershire County Council	2013	2014 onwards	Increased awareness at District, County and general public levels of air quality issues across the County	<1%	The inception of the Air Quality Steering Group and ongoing liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the general public across Worcestershire	The Air Quality Steering Group and ongoing liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the general public across Worcestershire
5.5.3	Encourage uptake of employer and residential travel plans for major employers and new developments to area	Promotion of alternative modes of transport through organisation and personal travel planning	Worcestershire County Council, Worcester City Council	2015-2016	Easter 2015 onwards.	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.3.1	Travel Planning	Promotion of alternative modes of transport through business and personal travel planning	Worcestershire County Council	2014-2015	Easter 2015 onwards.	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015
5.3.4	Promote flexible working arrangements	Promotion of flexible working arrangements with local businesses to include working from home opportunities, staggered start times etc.	Worcestershire County Council, Wychavon District Council	2014-2016	Easter 2015 onwards.	Increase in use of flexible working arrangements with local businesses.	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015
5.4.4	Make air quality information more available and accessible	Proactive publication of information on WRS website	WRS	2013 onwards	2013 onwards	Improved availability of air quality information. More information proactively published on website.	<1%	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.



No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.5.1	Produce Air Quality Supplementary Planning Document	Provide consistent approach to planning application and mitigation through production and adoption of Supplementary Planning Document for Air Quality	WRS	2014	2015 onwards	Formally adopted and utilised AQ SPD at all six LPAs across Worcestershire	<1%	Development of SPD for Air Quality started and on-going	Development of SPD for Air Quality started and on-going
5.6.3	Air Quality Networks	Collaboration between networks of neighbouring local authorities to tackle air quality in their area	Wychavon District Council, WRS	2014	2014 onwards	Improved cross boundary working between local authorities in Worcestershire	<1%	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.
5.6.8	Forge closer links with local health agencies	Improve relationships with health agencies to ensure public health aspect of air quality continues to be relevant	Wychavon District Council, WRS	2014	2014 onwards	Participation of relevant health agencies in the Worcestershire Air Quality Steering Group	<1%	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date
PS3	HGV >7.5t currently unable to utilise alternative bridge	Improvements to bridge to allow removal of weight restriction	Worcestershire County Council	2014	2015	Removal of weight restriction on Abbey road Bridge	<1%	Bridge improvement works completed. Weight restriction lifted. No further action required	Bridge improvement works completed. Weight restriction lifted. No further action required

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.3.8	Promote and support walking and cycling initiatives in Worcestershire	Imitative to encourage the uptake of walking and cycling by promoting the benefits using various packages such as The Chose How You Move Initiative	Worcestershire County Council, Wychavon District Council	2015-2016	Easter 2015 onwards	Change in behaviour to more sustainable modes of transport e.g. walking, cycling, public transport	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015
PS9	Poorly utilised car park in Burford Road	Encourage visitors frequenting shops to park in car park rather than on double yellow lines on Port Street, therefore reducing congestion	Wychavon District Council	N/A	N/A	Increased use of Burford Road car park	N/A	During the second sub-group meeting for Port Street this issue was discussed and WRS posed the idea of reducing car parking charges, or removing them, to encourage use of the car park and reduce number of cars stopping on double yellows to use shops. The local ward councillors unequivocally stated that this was not possible. Local ward councillors advised that the car park is heavily utilised in the evenings when the local cinema is open.	During the second sub-group meeting for Port Street this issue was discussed and WRS posed the idea of reducing car parking charges, or removing them, to encourage use of the car park and reduce number of cars stopping on double yellows to use shops. The local ward councillors unequivocally stated that this was not possible. Local ward councillors advised that the car park is heavily utilised in the evenings when the local cinema is open.
PS4	Traffic queuing at Waterside junction	Action relates to generic actions already included in Action Plan - see all above. Action will not be considered further.	N/A	N/A	N/A	N/A	N/A	N/A	N/A

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
PS8	Busy side roads with poor visibility for drivers exiting can cause congestion (could be improved by converting to one way system)	Action relates to generic actions already included in Action Plan - see 5.1.2 above. Action will not be considered further.	N/A	N/A	N/A	N/A	N/A	N/A	N/A

## Action Plan Progress – PORT STREET, EVESHAM AQMA

**Table 3.4.2 – Feasible Non-Progressed Non-Priority Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix but remain feasible actions to be considered in the future or as and when opportunities arise.

No.	Measure	Focus	Lead Authority	Comments
5.5.2	Formula for s106 (or CIL) contribution towards mitigation measures and programmes	Development of consistent formula for calculating s106 or CIL contributions from developers (damage costs)	District Council	
5.2.6	Low Emission Zones	Introduction of a low emission zone for vehicles using Port Street	County Council, District Council	
5.3.10	Car Clubs	Promotion of alternative modes of transport through organisation and personal travel planning	County Council, District Council	
5.6.5	Lobby and support government to ensure the manufacture and use of cleaner vehicles and fuels	Lobby and support government to ensure the manufacture and use of cleaner vehicles and fuels	County Council, District Council	
5.6.9	Development of a Low Emission Strategy for Worcestershire	Development and implementation of low emission strategy to contain a variety of strategies aimed at reducing emissions.	County Council, District Council	
5.1.2	Change carriageway from two ways to one way. Consider	Change carriageway from two ways to one way. Consider inclusion of dedicated bus lane/cycle lane	County council	Likely not feasible due

	inclusion of dedicated bus lane/cycle lane etc.	etc.		to configuration of local highway network but yet to be fully assessed.
5.6.2	Influence Climate Change Strategy actions	There is a strong link between climate change strategy and air quality. Acknowledge this link by feeding air quality into climate change strategy	District Council	Will be progresses as and when consultation opportunities relating to Climate Change Strategies arise.
5.4.2	Provide link to real time air quality information	Provision of air quality info and health advice to vulnerable groups/individuals	District Council	
5.3.5	Workplace parking charging schemes	Discourage workers from driving to town centre places of work by introducing car park charging schemes for workplaces	District Council, County Council, Local businesses	
5.6.4	Lobby and support government to subsidise public transport	Encourage use of public transport by making it cheaper and therefore more attractive	County Council, District Council	
5.2.3	Park and Ride Schemes	Introduction of park and ride schemes to encourage people not to drive in to the town centre	District Council	
5.6.6	Lobby and support government to adopt policies to carry out nationally targeted green transport initiatives	Encourage uptake of sustainable modes of transport through green transport initiatives	County Council, District Council	
5.1.3	HGV or weight restriction on affected roads	Reduce volume of HGVs in area by introducing and/or enforcing weight restriction TROs	County Council, District Council	Source apportionment indicates percentage contribution to roadside emissions from HGVs to be 15%.
5.1.13	Alterations to parking provision and pricing (may result in decrease car use and increase uptake of public transport)	Discourage driving in to the town and encourage use of public transport, walking and cycling.	County Council, District Council	
5.1.10	Pedestrianisation of streets within area	Eliminate vehicle emissions from area by preventing vehicular access (with delivery vehicle etc. exemptions)	County Council, District Council	Likely not feasible due to configuration of local highway network but not yet fully assessed.
5.3.7	Install secure cycle parking shelters	Encourage cycling as a mode of transport to the Port Street shopping area.	County Council	
5.1.4	Variable Message Signage (includes traffic info, car park info, bus and rail connection info etc.) Could be used in combination with Park and Ride schemes etc.	Use of VMS to encourage use of alternative modes of transport, directly drivers to car parks with free spaces etc.	County Council, District Council	
5.2.4	Railway Enhancements	Improvements to existing services and stations.	County Council, District Council, Network Rail	
PS6	Single in carriageway bus stop causes congestion in AQMA	Relocation of bus stop outside of AQMA towards Lidl	District Council, County Council	
5.6.7	Removal of receptors from air quality management areas	Remove residential housing from area therefore effectively removing sensitive receptors	County Council, District Council	Likely not feasible but yet to be fully assessed.
5.5.5	Compulsory Purchase Schemes	Removal of receptors and/or street canyon through compulsory purchase of property.	District Council	Likely not feasible but yet to be fully assessed.
5.3.6	Improve cycling and walking routes in local areas	Encourage use of cycling and walking routes by improving provision and quality	County Council	

5.2.11	Roadside emissions testing	Improve emissions by spot testing vehicles at the roadside in joint operations with VOSA and the Police	District Council	
5.6.1	Air quality policies in Local Development Plans	Link air quality policies to local development plans	District Council	Will be progresses as and when consultation opportunities relating to Local Development Plans arise.
5.3.3	Promote teleconferencing and encourage uptake	Promote teleconferencing and encourage uptake	District Council, County Council	
5.1.7	Improvement of signage for traffic to avoid AQMA	Encourage strategic traffic to avoid travelling through the AQMA and directing traffic via other routes	County Highways	
PS1	Current boundary of AQMA requires amendment to conform with best practice guidance	Amendment of AQMA boundary to exclude open areas in accordance with guidance	WRS	
5.1.11	Remove build-out in streets to allow cars to pass simultaneously	Remove build-out in streets to allow cars to pass simultaneously	County Council	
5.1.12	Removal of parking bays in affected streets	Improve flow by removing any existing parking bays	County Council	
5.1.14	Traffic calming measures (aim is to deter drivers using route)	Discourage drivers from using the route	County Council	
5.2.7	Introduce fixed penalty notices for stationary idling	Discourage stationary idling	District Council, County Council	
5.2.8	Introduce differential parking rates - engines	Encourage drivers of higher emission vehicles from driving in to city centre	District Council, County Council	
5.2.9	Introducing differential parking rates - air quality event	Discourage people from driving in to the city during times of poor air quality by introducing variable parking rates that are much higher during a poor air quality event	County Council, District Council	
5.2.12	Signage identifying AQMA	Encourage strategic traffic to avoid travelling through the AQMA and directing traffic via other routes by advertising location of the AQMA on signage	County Highways	
5.4.1	Smarter Driving Tips	Reduce emissions through driver education	County Council, District Council	
5.4.3	Establish an Air Quality Alert System	Provision of air quality info and health advice directly to vulnerable groups/individuals	District Council	
PS12	No automatic monitoring has previously been undertaken	Undertaken minimum 6 months automatic monitoring as part of any revocation process and to inform any future detailed assessment	WRS, District Council	Not considered beneficial to undertake automatic monitoring at this stage. Will be considered in future as part of monitoring any improvements in air quality as a result of implementation of actions.

## Action Plan Progress – PORT STREET, EVESHAM AQMA

**Table 3.4.3 – Non-Feasible Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix and have been discounted as unfeasible for the Port Street AQMA following further consideration. These actions will not be reported on in the future.

No	Measure	Focus	Reasons Why Action Not Feasible
5.1.9	Introduce or improve feeder/merger lanes to improve flow	Action is not feasible for AQMA and therefore will not be progressed further	The local highway network configuration in the Port Street area is not conducive to the introduction of feeder/merger lanes. There are no existing feeder/merger lanes.
PS2	Street canyon on incline	Not feasible to change therefore not considered any further	Not feasible to alter the physical geography of the AQMA.
PS10	AQO only exceeded at a few properties	Observation rather than action - will not be considered further	Noted – AQMA remains relevant. Action is an observation rather than a tangible action.
5.1.6	Priority bus and high occupancy vehicle (HOV) lanes and corridors	Encourage bus use and car sharing by providing priority lanes for such vehicles	Not feasible due to confined spaces within AQMA.
5.2.13	Tree Planting	Provision of trees to provide physical barrier or attenuation of particulate matter	Not feasible due to confirmed spaces within AQMA. Little evidence to demonstrate tree planting is effective with regard to reducing NO2.

### **3.5 Welch Gate Sub-Group Progress**

The Welch Gate Sub-Group currently consists of three members, including two representatives from WRS and the formal air quality representative from Worcestershire County Council. At the present time no councillors have attended the steering group meetings held so far.

The group initially met as part of the countywide steering group meeting held on 18<sup>th</sup> June 2014. There have also been discussions between Worcestershire County Council and WRS following the production of the County Council's technical discussion paper for the Welch Gate AQMA.

The following priority actions were identified by WRS using the prioritisation matrix for the Welch Gate AQMA:-

- 5.1.1 Alteration to phasing of traffic light systems
- 5.1.3 HGV or weight restriction on affected roads
- 5.1.5 Loading and unloading restrictions during peak traffic times
- WG4 Normal length buses block road in narrow bends

The Worcestershire County Council technical discussion paper outlined potential proposals for improving air quality within the Welch Gate AQMA, Bewdley. The paper suggested that localised accessibility to the town should be considered holistically as part of a strategic plan for Bewdley. The paper suggests that one potential solution could be the withdrawal of town-centre parking and relocation to a single, large facility within easy access of strategic routes. Investment would then be made to improve the walking route between the car park and the town.

Following discussions with the County Council it became apparent that previous trials in relation to traffic light phasing had yielded little success and any changes to the two pedestrian crossings would not be possible due to very high costs and technological limits. Therefore it was decided that action 5.1.1 would not be progressed further.

Further discussions also revealed that the bus services had been substantially cut in Bewdley and a local operator had gone out of business. The County Council indicated that it had no control over commercial bus companies only school services. Therefore any commitment to using shorter length buses as in action WG4 would be on a purely voluntarily basis on the part of the bus companies.

Details of progress made with all identified actions are detailed in the tables below. The actions are produced across three tables splitting actions into groups covering feasible actions where progress has been made, feasible actions where no progress has been made and non-feasible actions that will not be considered further.



## Action Plan Progress – WELCH GATE, BEWDLEY AQMA

### Table 3.5.1 – Progressed Actions to 30<sup>th</sup> April 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
WG4	Normal length buses block road in narrow bends	Buses cause blockage in road leading to back up of traffic not being able to pass. Encourage bus companies through Bus Quality partnership to use shorter length buses on route.	Wyre Forest District Council (WCC no longer manages any bus fleet other than school buses, all operators are private companies)	2015-2016	2017	More shorter length buses seen in AQMA area	2%	County wide action plan adopted by Wyre Forest District Council. Measure identified as priority action for Welch Gate following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	Bus services heavily cut and local operator ceased trading. County Council advised they have no influence over bus networks.
5.1.1	Alteration to phasing of traffic light systems	Two sets of traffic lights (pedestrian crossings) seen to affect traffic build up in AQMA.	Worcestershire County Council	2014-2015	n/a	Decrease in congestion within AQMA area	3%	County wide action plan adopted by Wyre Forest District Council. Measure identified as priority action for Welch Gate following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	Discussions held with County Council representative ahead of second steering group meeting. They advised action was unfeasible due to very high cost and technical limitations due to site layout. Previous trials had been held in past but viewed unsuccessful
5.1.5	Loading and unloading restrictions during peak traffic times	Restrictions are already in place but further enforcement may remove obstacles and help improve traffic flow within AQMA.	Wyre Forest District Council	2015-2016	2018	Decrease in illegally parked vehicles	2%	County wide action plan adopted by Wyre Forest District Council. Measure identified as priority action for Welch Gate following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	Consultation made with the County Council who confirmed this was a viable action that could be further pursued given the appropriate political support. District Council identified as lead authority.
5.1.3	HGV or weight restriction on affected roads	Encourage HGVs to avoid AQMA and find alternative routes	Worcestershire County Council	2015-2016	2018	Less HGV's travelling through AQMA	2%	County wide action plan adopted by Wyre Forest District Council. Measure identified as priority action for Welch Gate following assessment using prioritisation matrix tool. Research carried out regarding implementation feasibility.	Consultation made with the County Council who confirmed this was a viable action that could be further pursued given the appropriate political support.
5.5.4	Encourage	Encourage and facilitate	Wyre Forest	2013	2014 onwards	Greater	1%	Installation of electric vehicle charging	Worcestershire Regulatory Services is

	developers to provide sustainable transport facilities and links serving new developments	uptake of sustainable modes of transport where new developments are proposed	District Council, Worcestershire County Council			provision of sustainable transport facilities and links servicing new developments		points, or EV ready points and provision of secure cycle stores is routinely recommended by Worcestershire Regulatory Services through the planning consultation process.	currently working towards formalising air quality recommendations as policy with the various Worcestershire LPAs
5.3.2	Encourage car sharing	Promote car sharing services within Wyre Forest	Wyre Forest District Council, Worcestershire County Council	2015-2016	Easter 2015 onwards	Increase in number of people car sharing	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.2.5	Greening Council and Business Fleets	Secure use of "cleaner" fuels/higher Euro standard vehicles for Council and Business fleets. Support bid for installation of CNG facility in Worcestershire	Wyre Forest District Council, Worcestershire County Council, Climate Change Officers	2015-2016	2016 onwards	Increase in number of Council and business fleet vehicles of higher Euro Standard and/or utilising alternative fuels	1%	Joint OLEV bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for funding to carry out feasibility studies for the installation of a compressed natural gas filling facility in Worcestershire, and three sites in Birmingham.	Proposals for joint bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for the installation of a compressed natural gas filling facility in Worcestershire. Although not specifically applicable to WFDC such a facility may offer the opportunity for improvements to other Districts.
5.2.10	Installing electric vehicle charging points	Encourage and facilitate use of electric vehicles through provision of charging points in city	Wyre Forest District Council, Worcestershire County Council	2013	2014 onwards	Increase in availability of EV charging points and corresponding increase in use of electric vehicles	1%	Installation of EV charging points are routinely recommended by WRS for inclusion on relevant planning consents to all LPAs in Worcestershire	Worcestershire Regulatory Services is currently working towards formalising air quality recommendations as policy with the various Worcestershire LPAs
5.5.3	Encourage uptake of employer and residential travel plans for major employers and new	Promotion of alternative modes of transport through organisation and personal travel planning	Wyre Forest District Council, Worcestershire County Council	2015-2016	currently unknown	Increase in uptake of personal travel planning	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development

	developments to area					services. Change in behaviour towards more sustainable modes of transport.		programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.3.1	Travel Planning	Promotion of alternative modes of transport through organisation and personal travel planning	Wyre Forest District Council, Worcestershire County Council, Climate Change Officers	2015-2016	currently unknown	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.
5.4.5	Raise the profile and increase awareness of air quality within the region	Publication campaign relating to air quality to publicise and raise awareness of air quality and its implications	Wyre Forest District Council, Worcestershire County Council, Climate Change Officers	2013		Increased awareness at District, County and general public levels of air quality issues across the County	1%	The inception of the Air Quality Steering Group and ongoing liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the general public.	The inception of the Air Quality Steering Group and ongoing liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the general public.
5.3.	Smarter Choices - Choose How You Move marketing initiatives	Use of marketing and information methods to encourage use of sustainable travel modes and typically include workplace, school, residential, community, travel planning, car sharing and clubs, and awareness raising	Wyre Forest District Council, Worcestershire County Council, Climate Change Officers	2015/2016	Currently unknown	2014 onwards Change in behaviour towards more sustainable modes of transport.	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.

		campaigns						residents. County Council are currently exploring the provision of personal travel planning service for role out across the County	
5.4.4	Make air quality information more available and accessible	WRS to make all air quality documents available to the general public for access from the website	Worcestershire Regulatory Services	2013 onwards	2013 onwards	Improved availability of air quality information. More information proactively published on website.	1%	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.
5.5.1	Produce Air Quality Supplementary Planning Document	Document providing transparent and consistent advice to development control departments and developers relating to air quality	Wyre Forest District Council, Worcestershire Regulatory Services	2014	2015 onwards	Formally adopted and utilised AQ SPD at all six LPAs across Worcestershire	1%	Development of SPD for Air Quality started and on-going	Development of SPD for Air Quality started and on-going
5.6.3	Air Quality Networks	Group of councils working in partnership to address air quality issues across those areas	Wyre Forest District Council, Worcestershire Regulatory Services	2014	2014 onwards	Improved cross boundary working between local authorities in Worcestershire	1%	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.
5.6.8	Forge closer links with local health agencies	Aiming to forge partnership with local health authorities such as Public Health England to improve knowledge and understanding of local air quality and associated health risks	Worcestershire Regulatory Services, Local Health Agencies	2014	2014 onwards	Participation of relevant health agencies in the Worcestershire Air Quality Steering Group	1%	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date.	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date.
5.3.4	Promote flexible working arrangements	Promoting flexible working arrangements with local businesses	Wyre Forest District Council, Worcestershire Regulatory Services	2015-2016	currently unknown	Increase in use of flexible working arrangements with local businesses.	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.

								exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	
5.2.2	Freight Quality Partnership	Encourage freight vehicles to avoid AQMA and find alternative routes	Worcestershire County Council, Freight Transport Association, Road Haulage Association, Wyre Forest District Council	2015-2016	2016-2017	Decreased in freight movements through AQMA	2-5%	Air Quality Action Plan for Worcestershire formally adopted by Wyre Forest District Council. All identified measures for Welch Gate assessed using prioritisation matrix tool developed by WRS. First steering group meeting held to present prioritised measures and identifying potential stakeholders to drive these forward.	Further discussion with County Highways identified two separate approaches: 1 - use of paper HGV route maps is now updated, work should focus on updating data with sat nav companies to ensure route planning avoids AQMAs. 2. A wider FQP that potentially restricts HGV access to AQMAs could form part of a wider Transport Strategy for Worcester.
5.3.8	Promote and support walking and cycling initiatives in Worcestershire	Imitative to encourage the uptake of walking and cycling by promoting the benefits using various packages such as The Chose How You Move Initiative	County Council, District Council, Climate Change Officer	2015-2016	Easter 2015 onwards	Change in behaviour to more sustainable modes of transport e.g. walking, cycling, public transport	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme for the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015 with the aim of utilising the scheme across the whole county in the future.

## Action Plan Progress – WELCH GATE, BEWDLEY AQMA

**Table 3.5.2 – Feasible Non-Progressed Non-Priority Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix but remain feasible actions to be considered in the future or as and when opportunities arise.

No.	Measure	Focus	Lead Authority	Comments
5.2.6	Low Emission Zones	Restriction of polluting vehicles from AQMA	County Council, District Council	Action not yet progressed
5.6.2	Influence Climate Change Strategy actions	Encourage strategies for improving climate change and local air quality	Climate Change Groups, District Council, County Council	Action not yet progressed
5.2.1	Bus Quality Partnership	Working with bus partnerships to lower emissions	District Council, County Council, Bus Operators	County Council no longer manages any bus fleet other than school buses, all operators are now private companies
5.2.11	Roadside emissions testing	Undertaking roadside emissions testing to target worst polluting vehicles and issues fines under Regulations	District Council	Action not yet progressed
5.4.2	Provide link to real time air quality information	Live and available air quality information	District Council	Action not yet progressed
5.3.5	Workplace parking charging schemes	Promote charging schemes to discourage single occupancy car journeys and encourage take up of sustainable alternatives (car sharing, cycling, walking, public transport)	District Council, County Council	Action not yet progressed
5.6.4	Lobby and support government to subsidise public transport	Encourage use of public transport by making more available, efficient and cheaper.	District Council, County Council	Action not yet progressed
5.6.6	Lobby and support government to adopt policies to carry out nationally targeted green transport initiatives	Encourage uptake of sustainable modes of transport through green transport initiatives	District Council, County Council	Action not yet progressed
5.2.9	Introducing differential parking rates - air quality event	Parking rates linked to times of poor air quality or special events to encourage uptake of park and ride facilities	District Council, County Council	Action not yet progressed
5.6.9	Development of a Low Emission Strategy for Worcestershire			Action not yet progressed
5.1.10	Pedestrianisation of streets within area	Complete pedestrianisation and removal of emissions	County Council, District Council	Action not yet progressed
WG8	Two way traffic flow results in congestion due to narrow carriageway	Conversion of two way flow into one way street.	County Council, District Council	Action not yet progressed
5.3.7	Install secure cycle parking shelters	Secure cycle parking facilities to encourage the uptake of cycling.	County Council, District Council	Action not yet progressed
5.1.4	Variable Message Signage (includes traffic info, car park info, bus and rail connection info etc.) Could be used in combination with Park and Ride schemes etc.	Use of VMS to encourage use of alternative modes of transport or direct drivers to car parks with spaces to avoid unnecessary journeys between car parks	County Council, District Council	Action not yet progressed
5.2.3	Park and Ride Schemes	Provision of out of town car park for operation of park and ride bus service	District Council , County Council	Action not yet progressed
5.6.7	Removal of receptors from air quality	Purchase of houses and removal of receptors from their homes	District Council , County Council	Although action is potentially feasible it is

	management areas			unlikely to be explored further given practicalities involved.
5.3.3	Promote teleconferencing and encourage uptake	Encouragement of business to use flexible working arrangements and technologies	County Council, District Council, Climate Change officers	Action not yet progressed
5.1.7	Improvement of signage for traffic to avoid AQMA	Encourage strategic traffic to avoid travelling through the AQMA and find alternative routes	County Highways	Action not yet progressed
5.6.1	Air quality policies in Local Development Plans	Air quality built into local development plans via consultation	County Council, District Council	Action not yet progressed
5.5.2	Formula for s106 (or CIL) contribution towards mitigation measures and programmes	Gain S106 monies from developers for development impacting AQMAs or air quality that can be used towards mitigation measures and air quality improvements	District Councils	Action not yet progressed
5.6.5	Lobby and support government to ensure the manufacture and use of cleaner vehicles and fuels	Lobbying government to further ensure development of greener vehicles and fuels through policy changes, new initiatives and funding opportunities	County Council, District Council	Action not yet progressed
5.1.2	Change carriageway from two ways to one way. Consider inclusion of dedicated bus lane/cycle lane etc.	Maximising efficiency of roadway (db. This is restricted by very narrow nature of carriageway).	County Council, District Council	Action not yet progressed
5.1.13	Alterations to parking provision and pricing (may result in decrease car use and increase uptake of public transport)	Increasing price to park to deter car journeys or sign post to cheaper more strategic alternatives	District Council, County Council	Action not yet progressed
5.2.4	Railway Enhancements	Improvements to rail services to encourage patronage. Addition improvements to railway station may include cycle stores, footpath lighting, variable message signage and integrated bus services	County Council, District Council, Network Rail	Action not yet progressed
5.2.7	Introduce fixed penalty notices for stationary idling	Enforce penalty notices for parked drivers who refuse to turn off engines	District Council	Action not yet progressed
5.2.8	Introduce differential parking rates - engines	Different rates of parking depending on factors such as engine size, emissions	District Council, County Council	Action not yet progressed
5.2.12	Signage identifying AQMA	Signs at various locations within or adjacent to the AQMA to encourage behavioural changes of drivers	County Council, District Council	Action not yet progressed
5.3.6	Improve cycling and walking routes in local areas	Encourage comprehensive walking and cycling networks to compliment existing routes and integrating local transport hubs.	County Council, District Council	Action not yet progressed
5.3.10	Car Clubs	Pool ownership of cars for members use	County Council, District Council	Action not yet progressed
5.4.1	Smarter Driving Tips	The introduction of environmentally conscious driving techniques and optimal vehicle operation (includes factors such as driving behaviour, tyre type and pressure, and speed management)	County Council, District Council, Climate Change officers	Action not yet progressed
5.4.3	Establish an Air Quality Alert System	Free information service about air pollution and related health advice to individuals with health concerns made worse by poor air quality	County Council, District Council	Action not yet progressed
WG1	More than 8 years since detailed modelling and automatic monitoring undertaken	Undertake detailed modelling to provide source apportionment data, required emissions reduction and any boundary amendments needed	WRS, District Council	Action not yet progressed
WG2	Main issues is volume of traffic proceeding to two bridges	n/a	n/a	Action not yet progressed
WG5	No waiting box markings are ignored	Yellow box markings to be repainted and sign posted. Install cameras and penalties for vehicles contravening markings.	District Council, County Council	Action not yet progressed
WG6	Pedestrian traffic light at PH in Dog Lane cause congestion at junction of Welch Gate	Relating to alteration of traffic lights	District Council, County Council	Action not yet progressed
WG7	HGVs traverse Welch Gate even though bridge has weight limit	Action relates to generic actions - weight restriction, FQP, signage - all above	District Council, County Council	Action not yet progressed
WG9	There are three local schools in vicinity	Action relates to generic actions - school travel planning, signage	District Council, County Council	Action not yet progressed

## Action Plan Progress – WELCH GATE, BEWDLEY AQMA

**Table 3.5.3 – Non-feasible Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix and have been discounted as unfeasible for the Welch Gate AQMA following further consideration. These actions will not be reported on in the future.

No	Measure	Focus	Reasons Why Action Not Feasible
5.1.6	Priority bus and high occupancy vehicle (HOV) lanes and corridors	Restricting parts of carriageway to priority vehicles	The section of road is too narrow to implement any additional lanes.
5.1.8	Introduction of traffic signals at roundabouts	Not applicable to Welch Gate AQMA as no roundabouts in area	There are no roundabouts in the area that would have a bearing on the AQMA.
5.1.9	Introduce or improve feeder/merger lanes to improve flow	Improvements to lane flow or priorities	No capacity on the section of road to change or alter the lanes.
5.1.11	Remove build-out in streets to allow cars to pass simultaneously	Not applicable to Welch Gate as there is no build out or excessive pavement area	The street is narrow and there is no excessive pavement area to be able to widen the road.
5.1.12	Removal of parking bays in affected streets	Not applicable to Welch Gate AQMA as there are no parking bays	There are no parking bays in this area.
5.2.13	Tree Planting	Planting of green infrastructure in a bid to mitigate pollutants - no evidence of having significant impact within AQMAs	Due to the road layout/narrow street it is considered there is not sufficient area for any tree planting to take place.
WG3	Street canyon	Alter the layout of the area to remove street canyon.	Some of the buildings are part of conservation area and cannot be altered. The costs involved would also be prohibitive.



## 3.6 Worcester Urban Sub-Group Progress

The Worcester Urban Sub-Group currently comprises seven members, including two representatives from WRS, four councillors (both District and County) and the formal Worcestershire County Council air quality representative.

The Sub-Group covers the following designated AQMAs:

- Dolday AQMA
- Lowesmoor AQMA
- Rainbow Hill AQMA

Following completion of the prioritisation matrix the following actions were identified as priority actions for each of the above AQMAs:

### Dolday AQMA:

- 5.1.7 Improvement of signage to avoid AQMA
- 5.2.2 Freight Quality Partnership
- DD3/5.1.1 Alteration to traffic light phasing
- DD5/5.2.1 Bus Quality Partnership

### Lowesmoor AQMA:

- 5.1.1/LRH5 Loading and unloading restrictions during peak times
- 5.1.7 Improvement of signage to avoid AQMA
- 5.2.2 Freight Quality Partnership
- 5.2.1 Bus Quality Partnership

### Rainbow Hill AQMA:

- 5.2.1 Bus Quality Partnership
- 5.1.1/LRH5 Loading and unloading restrictions during peak times
- 5.3.4 Promote flexible working arrangements
- 5.1.4 Variable message signage

Following development of the Worcestershire County Council technical discussion paper for the Worcester urban area it became apparent that problem of air quality in the city centre is tied in with farther reaching issues involving local transport strategy and accessibility in Worcester city centre. Congestion and poor accessibility in Worcester are directly linked to air quality. In a small cathedral city with a limited road network we see AQMAs and emerging areas of poor air quality along arterial routes in and out of the city centre where poor accessibility and congestion are daily problems. Solving the issue of accessibility is key to solving the problem of air quality.

Currently there is no transport or accessibility strategy that focuses on the city centre. The existing Worcester Transport Strategy is effectively a comprehensive access enhancement strategy for the entire Worcester urban area. However, it does not include any detailed transport plan for the city centre itself and treats the city centre as a 'destination'. It is understood that there is no detailed plan for the city centre because, until now, the City Council and County Council have not pursued a more detailed Masterplan which would set out how the city centre should be developed and accessed for all modes of transport. The sub-group agree that a city centre transport plan or Masterplan is key to tackling poor air quality within the central AQMAs and identified areas of poor air quality.

Worcestershire County Council currently has plans to invest in a city centre micro-simulation model to enable to various interested parties to test alternative options for managing traffic and access within the city centre.

Details of the progress with the implementation of all identified options are detailed in the tables below. However, a short summary of significant progress is provided below for clarity.

In light of the above key issues the sub-group considers that the progression of one or two of the priority actions identified in the Air Quality Action Plan for Worcestershire would be ineffectual and that the focus should be on securing the inclusion of these, and other actions, in a wider low emission strategy for Worcester city, linked to, or forming part of, any city centre transport strategy or Masterplan.

The sub-group will actively engage with the development of the city centre transport strategy or Masterplan as it moves forward.

In January 2015 Worcestershire County Council implemented the Lowesmoor Air Pollution Control Zone. This involved publicising intentions to start enforcing existing traffic regulation orders and restrictions along Lowesmoor in the run up to going live in January 2015. During week one of renewed enforcement, officers from Worcestershire County Council were on site to further inform and advise drivers. The existing restrictions now being more actively enforced are as follows:

- Eastbound renewed enforcement of an existing traffic regulation order that restricts all vehicles, with the exception of buses, entering Lowesmoor between 1530 and 1800 Monday to Friday. The aim of this TRO is to reduce the volume of traffic using Lowesmoor as a route out of the city centre during peak afternoon times.
- Westbound renewed enforcement of the existing bus lane/bus gate system to encourage private vehicles not to use Lowesmoor and the subsequent bus gate to enter the city centre at any time of day. The enforcement of this restriction involves long hold times at the bus gate for vehicles not fitted with appropriate transponders.

Enforcement currently involves spot monitoring and increased holding times in relation to the bus gate. Worcestershire County Council is currently looking to progress the installation of enforcement cameras in the area.

The initial set of traffic data following the go-live date demonstrated the following:

- A 74% reduction in vehicles travelling eastbound out of the city centre during afternoon peak times (a reduction from an average of 500 non-permitted vehicles an hour to approximately 130 non-permitted vehicles per hour).
- A 90% reduction in vehicles travelling into the city centre along Lowesmoor and using the bus lane/gate to access the city centre (a reduction from an average of 220 non-permitted vehicles an hour to 24 non-permitted vehicles an hour)

We expect that these reductions in traffic volume, if maintained, will result in a tangible improvement in NO<sub>2</sub> levels within the Lowesmoor AQMA. We are continuing to gather monitoring data from a network of diffusion tubes in the area and will be able to report detailed data back once a calendar year of data has been collected and bias-adjusted.

Linked to bus quality partnership priority actions Worcestershire County Council is currently exploring options for putting forward a bid to the Low Emission Bus Scheme in 2015. The internal Bid Development Team met initially on 26<sup>th</sup> May 2015, including air quality officers from WRS, and all in attendance were agreeable to moving forward. The Bid Development Team will now approach the relevant bus operators to gauge level of support, or otherwise, for submission of a bid. If support is received a bid will be submitted by the 31<sup>st</sup> October 2015 deadline. The preferred option is currently to propose a major bid including the major and minor bus operators to effectively bring about a mass conversion of the older fleet to more modern ultra-low emission vehicles within Worcester city centre and associated routes. Buses are currently a significant contributor to poor air quality in the AQMAs and wider city centre area and as such mass conversion of the older fleet to ultra-low emission vehicles will have a significant impact on air quality. Should the bid go forward the expected improvement in air quality will be formally estimated as part of the bidding process. The development of this bid is linked to a number of actions identified within the Action Plan including bus quality partnerships and low emission zones.

Details of progress made with all identified actions are detailed in the tables below. For each AQMA the actions are produced across three tables splitting actions into groups covering feasible actions where progress has been made, feasible actions where no progress has been made and non-feasible actions that will not be considered further.

## Action Plan Progress – DOLDAY, WORCESTER AQMA

Table 3.6.1 – Progressed Actions to 30<sup>th</sup> April 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.1.7	Improvement of signage for traffic to avoid AQMA	Encourage strategic traffic to avoid travelling through the AQMA and directing traffic via other routes	Worcestershire County Council	2013	2014-2031	Decrease in traffic flows through AQMA. Decrease in number of strategic journeys through AQMA	5-10%	This action forms part of wider Worcester A4440 improvement works. The A4440 improvement works are currently underway	This action forms part of wider Worcester A4440 improvement works. The A4440 improvement works are currently underway
5.2.2	Freight Quality Partnership (work with sat nav providers)	Encourage freight vehicles to avoid AQMA and find alternative routes through work with sat nav data providers to ensure freight is routinely routed around AQMA	Worcestershire County Council	2015	2016 onwards	Significant reduction of strategic freight diverted away from AQMA.	5-25%	Steering Group identified that use of Worcestershire County Council Lorry Route Advisory Map has declined significantly in recent years due to now almost universal use of sat nav systems. Group agree should focus on working with sat nav data providers to ensure that HGVs are routinely routed around AQMA.	Steering Group identified that use of Worcestershire County Council Lorry Route Advisory Map has declined significantly in recent years due to now almost universal use of sat nav systems. Group agree should focus on working with sat nav data providers to ensure that HGVs are routinely routed around AQMA.
DD3 and 5.1.1	Alteration to Traffic Light Phasing in and around Dolday	Explore whether alteration to traffic light phasing around the Dolday AQMA could improve flow within the AQMA, specifically in area where measured NO <sub>2</sub> is particularly high	Worcestershire County Council	2014	2014	Improved flow of traffic around Dolday. Reduction in queuing times.	1-2%	Action completed by Worcestershire County Council in 2014	Action completed by Worcestershire County Council in 2014. County Council data demonstrates reduction in queuing times.

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.2.1/DD5	Bus Quality Partnership (as part of a wider Worcester City Centre Accessibility Masterplan Strategy and combined Low Emission Strategy or via Low Emission Bus Scheme bid)	Reduce bus related emissions in AQMA through use of Bus Quality Partnerships (BQP) with local operators. Worcester City bus station is located on perimeter of Dolday AQMA and as such bus contribution to emissions is high. As of April 2015 focus shift towards development of major Low Emission Bus Scheme (LEBS) bid.	Worcestershire County Council	For Low Emission Bus Scheme Bid 2015  For voluntary BQP if LEBS bid doesn't go forward or is unsuccessful 2016-2017	If LEBS bid successful 2016-2017  For voluntary BQP is LEBS bid doesn't go forward or is unsuccessful 2018 onwards	Elimination of lower Euro standard buses on city centre routes (which Euro Standards to be agreed should political support for such an action be secured) by as yet unknown date.  Major conversion of fleet to ULEVs.	5-25%	Sub Group identified that root issue for Worcester City is a lack of a Masterplan for the City Centre. The Group agree that best way forward is to promote and facilitate the development and implementation of a Masterplan for Worcester City with a combined Low Emission Strategy to incorporate provision for bus quality partnerships.  Initiation of LEBS bid process. Subject to support of local operators a major LEBS bid will be submitted by end October 2015.	During further Sub Group meetings the Group has considered a number of potential ideas for bus provision in Worcester City including removal of the bus station and introduction of a City Centre Bus Loop.  Initiation of LEBS bid process. Subject to support of local operators a major LEBS bid will be submitted by end October 2015
5.5.3	Encourage uptake of employer and residential travel plans for major employers and new developments to area	Promotion of alternative modes of transport through organisation and personal travel planning	Worcestershire County Council, Worcester City Council	2015-2016	Easter 2015 onwards.	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.3.2	Encourage car sharing	Promote development and use of car sharing through potential County-wide personal travel planning service	Worcestershire County Council	2014-2015	Easter 2015 onwards.	Increase in number of people car sharing	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015
5.3.7	Install secure cycle parking shelters	Encourage cycling as a mode of transport into the city centre	Worcestershire County Council	2015-2016	2015 onwards	Increase in number of secure cycle parking shelters in City, increase in use of secure cycle parking shelters	<1%	Worcestershire County Council has advised whilst Worcester City currently has excellent provision of secure cycle parking shelters they are at capacity and more are required. Additional secure cycle parking shelters are currently planned	Additional secure cycle parking shelters are being installed in Worcester City Centre as part of on-going and upcoming developments. In 2015 additional cycle parking will be installed as part of the Cattle Market development and options to increase capacity at Worcester Foregate Street rail station are being explored.
5.2.5	Greening Council and Business Fleets	Secure use of "cleaner" fuels/higher Euro standard vehicles for Council and Business fleets. Support bid for installation of CNG facility in Worcestershire	Worcestershire County Council, in combination with the District Councils	2015-2016	2016 onwards	Increase in number of Council and business fleet vehicles of higher Euro Standard and/or utilising alternative fuels	<1%	Joint OLEV bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for funding to carry out feasibility studies for the installation of a compressed natural gas filling facility in Worcestershire, and three sites in Birmingham.	Proposals for joint bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for the installation of a compressed natural gas filling facility in Worcestershire. Although not specifically applicable to WC such a facility may offer the opportunity for improvements to other Districts.

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.6.9	Development of a Low Emission Strategy for Worcestershire	Development and implementation of low emission strategy to contain a variety of strategies aimed at reducing emissions.	Worcestershire County Council and Worcester City Council	2014 onwards	currently unknown due to infancy of scheme	Formal adoption and implementation of Low Emission Strategy	Currently unknown - dependant on what measures are included in any Low Emission Strategy and if political support for a Low Emission Strategy can be secured.	Worcestershire County Council Highways technical discussion paper received and reviewed. Identified wider transport planning issues with Worcester City centre which are intrinsically linked to air quality. There is no existing Masterplan for Worcester City centre. Steering Group members agree that a Worcester City Centre Masterplan with a combined Low Emission Strategy is appropriate way forward.	Relevant interested Steering Group members met for a second time and support was given for the promotion of the idea of a Worcester City Centre Masterplan with a combined Low Emission Strategy. Work towards promoting such a strategy with the aim of securing political support is in its infancy. In February 2015 air quality issues were promoted at the City Council Congestion Review & Scrutiny Group and the idea of a combined Masterplan and Low Emission Strategy mooted. There was general agreement with this approach.
5.2.10	Installing electric vehicle charging points	Encourage and facilitate use of electric vehicles through increased provision of charging points	Worcester City Council, Worcestershire County Council	2013	2014 onwards	Increase in availability of EV charging points and corresponding increase in use of electric vehicles	1.50%	Installation of EV charging points are routinely recommended by WRS for inclusion on relevant planning consents to all LPAs in Worcestershire. Two EV charging points are available in St Martins Gate City Council car park.	Worcestershire Regulatory Services is currently working towards formalising air quality recommendations as policy with the various Worcestershire LPAs
5.5.4	Encourage developers to provide sustainable transport facilities and links serving new developments	Encourage and facilitate uptake of sustainable modes of transport where new developments are proposed	Worcester City Council, Worcestershire County Council	2013	2014 onwards	Greater provision of sustainable transport facilities and links servicing new developments	<1%	Installation of electric vehicle charging points, or EV ready points and provision of secure cycle stores is routinely recommended by Worcestershire Regulatory Services through the planning consultation process. In addition Worcestershire County Council are rolling out a personalised travel planning service to new developments from Easter 2015	Installation of electric vehicle charging points, or EV ready points and provision of secure cycle stores is routinely recommended by Worcestershire Regulatory Services through the planning consultation process. In addition Worcestershire County Council are rolling out a personalised travel planning service to new developments from Easter 2015



No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.2.4	Railway Enhancements	Improvements to trains, stations, services etc to encourage and facilitate increased use of rail travel	Worcestershire County Council, Network Rail	2013	2018	Completion of new Worcester Parkway rail station. Increased use of Worcester Foregate Street station following refurbishment.	<1%	Refurbishment of Worcester Foregate Street train station has recently taken place and a new Railway Station - to be called Worcester Parkway - has been approved and is scheduled to be completed in 2017.	A new Railway Station - to be called Worcester Parkway - has been approved and is scheduled to be completed in 2017.
5.3.1	Travel Planning	Promotion of alternative modes of transport through business and personal travel planning	Worcestershire County Council	2014-2015	Easter 2015 onwards.	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	<1%	County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.4.5	Raise the profile and increase awareness of air quality within the region	Raise the profile and increase awareness of air quality within the region	Worcester City Council, Worcestershire County Council	2013	2014 onwards	Increased awareness at District, County and general public levels of air quality issues across the County	<1%	The inception of the Air Quality Steering Group and on-going liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the general public.	The inception of the Air Quality Steering Group and on-going liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the general public.
5.3.9	Smarter Choices - Choose How You Move marketing initiatives	Promotion of alternative modes of transport through organisation and personal travel planning	Worcestershire County Council, in combination with Worcester City Council.	2002-2003	2004	Change in behaviour towards more sustainable modes of transport.	<1%	More recently Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.4.4	Make air quality information more available and accessible	Proactive publication of information on WRS website	WRS	2013 onwards	2013 onwards	Improved availability of air quality information. More information proactively published on website.	<1%	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.
5.5.1	Produce Air Quality Supplementary Planning Document	Provide consistent approach to planning application and mitigation through production and adoption of Supplementary Planning Document for Air Quality	WRS	2014	2015 onwards	Formally adopted and utilised AQ SPD at all six LPAs across Worcestershire	<1%	Development of SPD for Air Quality started and on-going	Development of SPD for Air Quality started and on-going
5.6.3	Air Quality Networks	Collaboration between networks of neighbouring local authorities to tackle air quality in their area	Worcester City Council, WRS	2014	2014 onwards	Improved cross boundary working between local authorities in Worcestershire	<1%	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.
5.6.8	Forge closer links with local health agencies	Improve relationships with health agencies to ensure public health aspect of air quality continues to be relevant	Worcester City Council, WRS	2014	2014 onwards	Participation of relevant health agencies in the Worcestershire Air Quality Steering Group	<1%	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
Non Action Plan Measure – relevant to air quality but not directly impacting an AQMA.	Introduction of a Journey Time Management System (JTMS) around A4440.	Real time journey time information, based on GPS/Bluetooth data, displayed on VMS boards around Worcester City on A4440 as part of wider improvement works.	Worcestershire County Council	2014	2015	Increase in number of vehicles staying on A4440 to reach destination rather than diverting through the City in search of a "quicker" route. Reduction in number of strategic trips through the city centre	1%-5%	JTMS planned as part of wider A4440 improvement works. Will be installed by June 2015	JTMS planned as part of wider A4440 improvement works. Will be installed by June 2016
Non Action Plan Measure – relevant to air quality but not directly impacting an AQMA.	Worcester City Centre Transport Model	Obtain a Worcester City Centre Transport Model to allow assessment of various options for Worcester City Centre	Worcestershire County Council	2014	2015	Development of Worcester City Centre Transport Model	0%	Worcestershire County Council developing a bid for a Worcester City Centre Transport Model to inform development of a Worcester City Centre Masterplan and combined Low Emission Strategy	Worcestershire County Council developing a bid for a Worcester City Centre Transport Model to inform development of a Worcester City Centre Masterplan and combined Low Emission Strategy

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
Non Action Plan Measure – relevant to air quality but not directly impacting an AQMA.	Installation of noise and pollution bund along A4440 at Whittington	Whittington identified as area which may require detailed assessment in the future. As part of A4440 improvement works Worcestershire County Council are proposing to install a noise and pollution bund where gaps in the existing bund are present to provide protection to the residential properties beyond.	Worcestershire County Council	2014-2015	2031	Installation of appropriate noise and pollution bund. Improvement in monitoring NO2 levels at properties protected by bund.	1-2%	Funding obtained for installation of bund. Installation of bund confirmed in wider A4440 improvement plans.	Funding obtained for installation of bund. Installation of bund confirmed in wider A4440 improvement plans.
Non Action Plan Measure – relevant to air quality but not directly impacting an AQMA.	Signal improvements along Barbourne Road and The Tything	Upgrading of old signal system along Barbourne Road and The Tything to provide intelligent system to improve congestion and manage traffic flows.	Worcestershire County Council	2015-2016	2017	Improved flow of traffic along arterial route into city centre. Reduced congestion and queuing time.	currently unknown	Upgrading of signal system incorporated into County Plan and funding available.	Upgrading of signal system incorporated into County Plan and funding available.
Non Action Plan Measure – relevant to air quality but not directly impacting an AQMA.	Improvement/enhancement of highway network within vicinity of Shrub Hill rail station.	Rationalisation of highway network in vicinity of Shrub Hill station to improve flow and reduce congestion.	Worcestershire County Council	medium-term	medium-term	Improved flow of traffic on local network, reduced congestion and queuing time.	currently unknown	Improvement/enhancement work forms part of medium-term plan for County Council	Improvement/enhancement work forms part of medium-term plan for County Council

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
NAWC1	Develop and implement Worcester City Centre Masterplan and combined Low Emission Strategy	Worcester City Council in conjunction with Worcestershire County Council to develop a City Centre Masterplan, WRS to facilitate development and implementation of a Low Emission Strategy to be combined with the City Centre Masterplan	Worcester City Council with Worcestershire County Council	2014 onwards	Currently unknown due to infancy of scheme	Formal adoption and implementation of City Centre Masterplan and Low Emission Strategy	Currently unknown - will depend on the measures put in place as part of the Low Emission Strategy and wider Masterplan. Estimate emission reduction could be as high as 40%	Steering Group identified that root issue for Worcester City is a lack of a Masterplan for the City Centre. The Group agree that best way forward is to promote and facilitate the development and implementation of a Masterplan for Worcester City with a combined Low Emission Strategy to incorporate provision for bus quality partnerships.	Steering Group and Worcestershire County Council have been promoting and discussing the need for a city centre Masterplan and Low Emission Strategy at various forums with Worcester City Council. It is essential to secure political will and support for this action to succeed.
5.3.8	Promote and support walking and cycling initiatives in Worcestershire	Imitative to encourage the uptake of walking and cycling by promoting the benefits using various packages such as The Chose How You Move Initiative	County Council, District Council, Climate Change Officer	2015-2016	Easter 2015 onwards	Change in behaviour to more sustainable modes of transport e.g. walking, cycling, public transport	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.3.4	Promote flexible working arrangements	Promotion of flexible working arrangements with local businesses to include working from home opportunities, staggered start times etc.	Worcestershire County Council, Worcester City Council	2014-2016	Easter 2015 onwards.	Increase in use of flexible working arrangements with local businesses.	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2016
5.1.4	Variable Message Signage (includes traffic info, car park info, bus and rail connection info etc.) Could be used in combination with Park and Ride schemes etc.	Use of VMS to encourage use of alternative modes of transport or direct drivers to car parks with spaces to avoid unnecessary journeys between car parks	County Council, District Council	2016 onwards	2017 onwards	Increase in number of VMS boards, increased uptake of alternative modes of transport	1-2%	Worcestershire County Council has installed VMS boards to direct drivers to car parks with free spaces in recent years, this has reduced the number of trips being made between car parks as drivers look for spaces. County Council currently progressing scheme to provide VMS boards in bus stops along major routes in the city to provide real time travel information. Inclusion of VMS real time travel information boards has been secured as part of development of a new Waitrose on London Road.	Worcestershire County Council has installed VMS boards to direct drivers to car parks with free spaces in recent years, this has reduced the number of trips being made between car parks as drivers look for spaces. County Council currently progressing scheme to provide VMS boards in bus stops along major routes in the city to provide real time travel information. Inclusion of VMS real time travel information boards has been secured as part of development of a new Waitrose on London Road.

## Action Plan Progress – DOLDAY, WORCESTER AQMA

**Table 3.6.2 – Feasible Non-Progressed Non-Priority Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix but remain feasible actions to be considered in the future or as and when opportunities arise.

No.	Measure	Focus	Lead Authority	Comments
DD14	New signals at junction of bridge exit with North Parade and relocation of pedestrian crossing. (Due to traffic queues back along the street canyon in Bridge Street from the exit onto North Parade due to a lack of traffic signals. Congestion is exacerbated by queues caused by pedestrian crossing in North Parade.)	Investigate/model new signals at North Parade and river bridge junction and installation if model outputs positive as part of wider Transport Strategy for Worcester City	County Council	
5.6.5	Lobby and support government to ensure the manufacture and use of cleaner vehicles and fuels	Lobby and support government to ensure the manufacture and use of cleaner vehicles and fuels	County Council, District Council	
5.2.6	Low Emission Zones	Introduction of a low emission zone for buses in Dolday	County Council, District Council	Possible LEZ for buses discussed as part of initial Low Emission Bus Scheme bid initiation meeting – likely that operators would face LEZ if not willing to voluntarily improve fleets.
DD4	Some congestion in AQMA linked to congestion further afield in city	County Council to undertake modelling of how flows can be improved along key routes across city.	County Council	
5.2.11	Roadside emissions testing	Improve emissions by spot testing vehicles at the roadside in joint operations with VOSA and the Police	District Council	
5.1.9	Introduce or improve feeder/merger lanes to improve flow	Introduce or improve feeder/merger lanes to improve flow	County Council	
5.3.5	Workplace parking charging schemes	Discourage workers from driving to city centre places of work by introducing car park charging schemes for workplaces	District Council, County Council, Local businesses	
5.6.4	Lobby and support government to subsidise public transport	Encourage use of public transport by making it cheaper and therefore more attractive	County Council, District Council	
DD1	New Bridge (assumption made that this would be a city centre bridge)	Reduce traffic volume through AQMA by providing additional vehicular crossing	County Council, District Council	
5.6.6	Lobby and support government to adopt policies to carry out nationally targeted green transport initiatives	Encourage uptake of sustainable modes of transport through green transport initiatives	District Council, County Council	
5.1.3	HGV or weight restriction on affected roads	Reduce volume of HGVs in area by introducing and/or enforcing weight restriction TROs	County Council, District Council	
5.2.9	Introducing differential parking rates - air quality event	Discourage people from driving in to the city during times of poor air quality by introducing variable parking rates that are much higher during a poor air quality event	County Council, District Council	
5.1.10	Pedestrianisation of streets within area	Eliminate vehicle emissions from area by preventing vehicular	County Council, District	



		access (with delivery vehicle etc. exemptions)	Council	
5.6.7	Removal of receptors from air quality management areas	Remove residential housing from area therefore effectively removing sensitive receptors	County Council, District Council	Likely not feasible but yet to be fully assessed.
5.2.3	Park and Ride Schemes	Introduction/maintenance of park and ride schemes to encourage people not to drive in to the city centre	District Council, County Council	Existing park and ride schemes were formally closed by Worcester City Council in 2014.
DD8	Number of proximal car parks	Rationalise city centre car parks, improve signage and implement park and ride - linked to actions 5.2.3 (Park & Ride) and 5.1.4 (VMS)	District Council, County Council	
5.5.5	Compulsory Purchase Schemes	Removal of receptors and/or street canyon through compulsory purchase of property.	District Council	Likely not feasible but yet to be fully assessed.
5.6.2	Influence Climate Change Strategy actions	There is a strong link between climate change strategy and air quality. Acknowledge this link by feeding air quality into climate change strategy	District Council	Will be progresses as and when consultation opportunities relating to Climate Change Strategies arise.
5.3.3	Promote teleconferencing and encourage uptake	Promote teleconferencing and encourage uptake	District Council, County Council	
5.5.2	Formula for s106 (or CIL) contribution towards mitigation measures and programmes	Development of consistent formula for calculating s106 or CIL contributions from developers (damage costs)	District Council	
5.6.1	Air quality policies in Local Development Plans	Link air quality policies to local development plans	District Council	Will be progresses as and when consultation opportunities relating to Local Development Plans arise.
5.1.2	Change carriageway from two ways to one way. Consider inclusion of dedicated bus lane/cycle lane etc.	Change carriageway from two ways to one way. Consider inclusion of dedicated bus lane/cycle lane etc.	County council	Likely not feasible due to configuration of local highway network but yet to be fully assessed.
5.1.5	Loading and unloading restrictions during peak traffic times	Currently exist within AQMA. All buildings have rear access.	District Council	
5.1.13	Alterations to parking provision and pricing (may result in decrease car use and increase uptake of public transport)	Discourage driving in to city and encourage use of public transport, walking and cycling.	District Council, County Council	
5.1.14	Traffic calming measures (aim is to deter drivers using route)	Discourage drivers from using the route	County Council	
5.2.7	Introduce fixed penalty notices for stationary idling	Discourage stationary idling	District Council, County Council	
5.2.8	Introduce differential parking rates - engines	Encourage drivers of higher emission vehicles from driving in to city centre	District Council, County Council	
5.2.12	Signage identifying AQMA	Raise awareness of existence of AQMA with aim of encouraging people not to drive through	District Council, County Council	
5.3.6	Improve cycling and walking routes in local areas	Encourage use of cycling and walking routes by improving provision and quality	County Council	
5.3.10	Car Clubs	Promotion of alternative modes of transport through organisation and personal travel planning	County Council, District Council	
5.4.1	Smarter Driving Tips	Reduce emissions through driver education	County Council, District Council	
5.4.2	Provide link to real time air quality information	Provision of air quality info and health advice to vulnerable groups/individuals	District Council	
5.4.3	Establish an Air Quality Alert System	Provision of air quality info and health advice directly to vulnerable	District Council	

		groups/individuals		
DD2	Current boundary of AQMA requires amendment to additional residential buildings on east boundary and exclude open areas	Amendment of AQMA boundary to exclude open areas in accordance with guidance	WRS	
DD6	Two street canyons within the AQMA	Action relates to generic actions - removal of receptors, compulsory purchase schemes	N/A	
DD7	Box markings are sometimes ignored during periods of congestion	Enforcement of box markings with associated penalties	County Council, District Council	
DD9	Nearby college of technology	Action relates to generic actions - travel planning etc.	County Council, District Council	
DD10	Existing monitoring positions are placed outside street canyons	Deployment of monitoring positions in more relevant locations	District Council	
DD11	Source apportionment indicates HDVs are biggest source of road emissions	Action relates to generic actions - freight quality partnership, weight restrictions etc.	County Council, District Council	
DD12	Further assessment indicates reducing vehicle emissions by 50% will be an effective measure	Action relates to generic actions above - see all above	District Council, County Council	
DD13	Recorded data needs working back to facades of properties	Reassessment of data back to facades to give more accurate representation of situation	District Council	
5.1.6	Priority bus and high occupancy vehicle (HOV) lanes and corridors	Encourage bus use and car sharing by providing priority lanes for such vehicles	County Council, District Council	

## Action Plan Progress – DOLDAY, WORCESTER AQMA

**Table 3.6.3 – Non-Feasible Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix and have been discounted as unfeasible for the Dolday AQMA following further consideration. [These actions will not be reported on in the future.](#)

No	Measure	Focus	Reasons Why Action Not Feasible
5.1.8	Introduction of traffic signals at roundabouts	Introduction of traffic signals at roundabouts	No roundabouts within AQMA, or immediate vicinity.
5.1.11	Remove build-out in streets to allow cars to pass simultaneously	Remove build-out in streets to allow cars to pass simultaneously	No build-out into streets in AQMA, or immediate vicinity.
5.1.12	Removal of parking bays in affected streets	Improve flow by removing any existing parking bays	No parking bays in AQMA, or immediate vicinity
5.2.13	Tree Planting	Provision of trees to provide physical barrier or attenuation of particulate matter	Not feasible due to confirmed spaces within AQMA. Little evidence to demonstrate tree planting is effective with regard to reducing NO2.

## Action Plan Progress – LOWESMOOR, WORCESTER AQMA

Table 3.6.4 – Progressed Actions to 30<sup>th</sup> April 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.1.5/LRH5	Loading and unloading restrictions during peak traffic times	Creation and implementation of TRO to restrict loading and unloading during peak times	Worcestershire County Council, District Council	2015-2016	2018-2019	Introduction and implementation of TRO during peak times. Reduced incidence of loading and unloading during peak times and therefore improved flow/reduced congestion.	5-10%	Identified as priority action following completion of WRS prioritisation matrix. Discussed by Steering Group who agreed action to be investigated further. No further action.	Identified as priority action following completion of WRS prioritisation matrix. Discussed by Steering Group who agreed action to be investigated further. No further action.
5.1.7	Improvement of signage for traffic to avoid AQMA	Encourage strategic traffic to avoid travelling through the AQMA and directing traffic via other routes	Worcestershire County Council	2013	2014-2031	Decrease in traffic flows through AQMA. Decrease in number of strategic journeys through AQMA	5-10%	This action forms part of wider Worcester A4440 improvement works. The A4440 improvement works are currently underway	This action forms part of wider Worcester A4440 improvement works. The A4440 improvement works are currently underway
5.2.2	Freight Quality Partnership (work with sat nav providers)	Encourage freight vehicles to avoid AQMA and find alternative routes through work with sat nav data providers to ensure freight is routinely routed around AQMA	Worcestershire County Council	2015	2016 onwards	Significant reduction of strategic freight diverted away from AQMA.	5-25%	Steering Group identified that use of Worcestershire County Council Lorry Route Advisory Map has declined significantly in recent years due to now almost universal use of sat nav systems. Group agree should focus on working with sat nav data providers to ensure that HGVs are routinely routed around AQMA.	Steering Group identified that use of Worcestershire County Council Lorry Route Advisory Map has declined significantly in recent years due to now almost universal use of sat nav systems. Group agree should focus on working with sat nav data providers to ensure that HGVs are routinely routed around AQMA.

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.2.1	Bus Quality Partnership (as part of a wider Worcester City Centre Accessibility Masterplan Strategy and combined Low Emission Strategy or via Low Emission Bus Scheme bid)	Reduce bus related emissions in AQMA through use of Bus Quality Partnerships (BQP) with local operators. Lowesmoor is a key bus route in and out of the city centre and therefore buses are a significant contributor to poor air quality. As of April 2015 focus shift towards development of major Low Emission Bus Scheme (LEBS) bid.	Worcestershire County Council	For Low Emission Bus Scheme Bid 2015  For voluntary BQP if LEBS bid doesn't go forward or is unsuccessful 2016-2017	If LEBS bid successful 2016-2017  For voluntary BQP is LEBS bid doesn't go forward or is unsuccessful 2018 onwards	Elimination of lower Euro standard buses on city centre routes (which Euro Standards to be agreed should political support for such an action be secured) by as yet unknown date.  Major conversion of fleet to ULEVs.	5-25%	Sub Group identified that root issue for Worcester City is a lack of a Masterplan for the City Centre. The Group agree that best way forward is to promote and facilitate the development and implementation of a Masterplan for Worcester City with a combined Low Emission Strategy to incorporate provision for bus quality partnerships.  Initiation of LEBS bid process. Subject to support of local operators a major LEBS bid will be submitted by end October 2015.	During further Sub Group meetings the Group has considered a number of potential ideas for bus provision in Worcester City including removal of the bus station and introduction of a City Centre Bus Loop.  Initiation of LEBS bid process. Subject to support of local operators a major LEBS bid will be submitted by end October 2015
5.5.3	Encourage uptake of employer and residential travel plans for major employers and new developments to area	Promotion of alternative modes of transport through organisation and personal travel planning	Worcestershire County Council, Worcester City Council	2015-2016	Easter 2015 onwards.	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.3.1	Travel Planning	Promotion of alternative modes of transport through business and personal travel planning	Worcestershire County Council	2014-2015	Easter 2015 onwards.	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015
5.3.7	Install secure cycle parking shelters	Encourage cycling as a mode of transport into the city centre	Worcestershire County Council	2015-2016	2015 onwards	Increase in number of secure cycle parking shelters in City, increase in use of secure cycle parking shelters	<1%	Worcestershire County Council has advised whilst Worcester City currently has excellent provision of secure cycle parking shelters they are at capacity and more are required. Additional secure cycle parking shelters are currently planned	Additional secure cycle parking shelters are being installed in Worcester City Centre as part of ongoing and upcoming developments. In 2015 additional cycle parking will be installed as part of the Cattle Market development and options to increase capacity at Worcester Foregate Street rail station are being explored.
5.2.5	Greening Council and Business Fleets	Secure use of "cleaner" fuels/higher Euro standard vehicles for Council and Business fleets. Support bid for installation of CNG facility in Worcestershire	Worcestershire County Council, in combination with the District Councils	2015-2016	2016 onwards	Increase in number of Council and business fleet vehicles of higher Euro Standard and/or utilising alternative fuels	<1%	Steering Group supporting a joint OLEV bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for funding to carry out feasibility studies for the installation of a compressed natural gas filling facility in Worcestershire, and three sites in Birmingham.	Proposals for joint bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for the installation of a compressed natural gas filling facility in Worcestershire. Although not specifically applicable to WC such a facility may offer the opportunity for improvements to other Districts.

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.2.10	Installing electric vehicle charging points	Encourage and facilitate use of electric vehicles through increased provision of charging points	Worcester City Council, Worcestershire County Council	2013	2014 onwards	Increase in availability of EV charging points and corresponding increase in use of electric vehicles	1.50%	Installation of EV charging points are routinely recommended by WRS for inclusion on relevant planning consents to all LPAs in Worcestershire. Two EV charging points are available in St Martins Gate City Council car park.	Worcestershire Regulatory Services is currently working towards formalising air quality recommendations as policy with the various Worcestershire LPAs
5.5.4	Encourage developers to provide sustainable transport facilities and links serving new developments	Encourage and facilitate uptake of sustainable modes of transport where new developments are proposed	Worcester City Council, Worcestershire County Council	2013	2014 onwards	Greater provision of sustainable transport facilities and links servicing new developments	<1%	Installation of electric vehicle charging points, or EV ready points and provision of secure cycle stores is routinely recommended by Worcestershire Regulatory Services through the planning consultation process. In addition Worcestershire County Council are rolling out a personalised travel planning service to new developments from Easter 2015	Installation of electric vehicle charging points, or EV ready points and provision of secure cycle stores is routinely recommended by Worcestershire Regulatory Services through the planning consultation process. In addition Worcestershire County Council are rolling out a personalised travel planning service to new developments from Easter 2015
5.6.9	Development of a Low Emission Strategy for Worcestershire	Development and implementation of low emission strategy to contain a variety of strategies aimed at reducing emissions.	Worcestershire County Council and Worcester City Council	2014 onwards	currently unknown due to infancy of scheme	Formal adoption and implementation of Low Emission Strategy	Currently unknown - dependant on what measures are included in any Low Emission Strategy and if political support for a Low Emission Strategy can be secured.	Worcestershire County Council Highways technical discussion paper received and reviewed. Identified wider transport planning issues with Worcester City centre which are intrinsically linked to air quality. There is no existing Masterplan for Worcester City centre. Steering Group members agree that a Worcester City Centre Masterplan with a combined Low Emission Strategy is appropriate way forward.	Relevant interested Steering Group members met for a second time and support was given for the promotion of the idea of a Worcester City Centre Masterplan with a combined Low Emission Strategy. Work towards promoting such a strategy with the aim of securing political support is in its infancy. In February 2015 air quality issues were promoted at the City Council Congestion Review & Scrutiny Group and the idea of a combined Masterplan and Low Emission Strategy mooted. There was general agreement with this approach.

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.2.4	Railway Enhancements	Improvements to trains, stations, services etc to encourage and facilitate increased use of rail travel	Worcestershire County Council, Network Rail	2013	2018	Completion of new Worcester Parkway rail station. Increased use of Worcester Foregate Street station following refurbishment.	<1%	Refurbishment of Worcester Foregate Street train station has recently taken place and a new Railway Station - to be called Worcester Parkway - has been approved and is scheduled to be completed in 2017.	A new Railway Station - to be called Worcester Parkway - has been approved and is scheduled to be completed in 2017.
5.4.5	Raise the profile and increase awareness of air quality within the region	Raise the profile and increase awareness of air quality within the region	Worcester City Council, Worcestershire County Council	2013	2014 onwards	Increased awareness at District, County and general public levels of air quality issues across the County	<1%	The inception of the Air Quality Steering Group and ongoing liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the general public.	

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.1.1	Alteration to phasing of traffic light systems	Explore alteration of traffic light phasing for signal systems within and affecting AQMA	Worcestershire County Council	2013-2014	2014-2015	Improved flow of traffic through Lowesmoor. Reduced congestion. Reduced volume of traffic.	5-10%	As part of County Council Lowesmoor improvement scheme enforcement of existing bus gate has been progressed. Cars and taxis are now prohibited from using the bus lane to cross City Walls Road into the city centre. If vehicles not fitted with appropriate transponder are detected in the bus gate they are held back by traffic signals for ten minutes. This discourages vehicles from using the bus lane and therefore helps to control the strict vehicle cohort numbers that are necessary to ensure flow around the Lowesmoor area of the city centre.	Implementation of bus gate enforcement went live on 11th January 2015. Initial data indicates a 90% reduction in non-permitted vehicles using the bus gate and a 74% reduction in non-permitted vehicles travelling along Lowesmoor during restricted peak times.
5.3.9	Smarter Choices - Choose How You Move marketing initiatives	Promotion of alternative modes of transport through organisation and personal travel planning	Worcestershire County Council, in combination with Worcester City Council.	2002-2003	2004	Change in behaviour towards more sustainable modes of transport.	<1%	More recently Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015



No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.4.4	Make air quality information more available and accessible	Proactive publication of information on WRS website	WRS	2013 onwards	2013 onwards	Improved availability of air quality information. More information proactively published on website.	<1%	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.
5.5.1	Produce Air Quality Supplementary Planning Document	Provide consistent approach to planning application and mitigation through production and adoption of Supplementary Planning Document for Air Quality	WRS	2014	2015 onwards	Formally adopted and utilised AQ SPD at all six LPAs across Worcestershire	<1%	Development of SPD for Air Quality started and on-going	Development of SPD for Air Quality started and on-going
5.6.3	Air Quality Networks	Collaboration between networks of neighbouring local authorities to tackle air quality in their area	Worcester City Council, WRS	2014	2014 onwards	Improved cross boundary working between local authorities in Worcestershire	<1%	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.
5.6.8	Forge closer links with local health agencies	Improve relationships with health agencies to ensure public health aspect of air quality continues to be relevant	Worcester City Council, WRS	2014	2014 onwards	Participation of relevant health agencies in the Worcestershire Air Quality Steering Group	<1%	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date
LRH6	Number of bus routes and non pull-in stops in AQMA	Move bus stops out of AQMA or create pull-in stops (if feasible) to improve flow.	Worcestershire County Council	2015	2016	Location of bus stops changed to minimise congestion and traffic flow problems	1-5%	Bus stops temporarily moved out of Lowesmoor onto Lowesmoor Terrace, therefore outside of AQMA. Steering Group involved in on-going discussions about appropriate location of bus stops within the Lowesmoor AQMA	Bus stops temporarily moved out of Lowesmoor onto Lowesmoor Terrace, therefore outside of AQMA. Steering Group involved in on-going discussions about appropriate location of bus stops within the Lowesmoor AQMA

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
LRH7	Traffic lights onto Lowesmoor Terrace cause congestion	During consultation County Council advised that congestion caused by contravention of existing TRO that restricts traffic eastbound through Lowesmoor during afternoon peak times - improve enforcement of existing TRO	Worcestershire County Council	2014	2015	Decreased in non-permitted vehicles along Lowesmoor at restricted times resulting in reduced volume of traffic and reduced congestion.	5-10%	As part of County Council Lowesmoor improvement scheme enforcement of existing TRO restricting access to buses and cycles during afternoon peak hours has been progressed. Vehicles other than buses and cycles are prohibited from travelling outbound along Lowesmoor. This reduces the volume of traffic, and therefore congestion, along Lowesmoor during afternoon peaks, a time which has been noted as being particularly bad for the area.	Implementation of bus gate enforcement went live on 11th January 2015. Initial data indicates a 90% reduction in non-permitted vehicles using the bus gate and a 74% reduction in non-permitted vehicles travelling along Lowesmoor during restricted peak times.
Non Action Plan Measure – relevant to air quality but not directly impacting an AQMA.	Introduction of a Journey Time Management System (JTMS) around A4440.	Real time journey time information, based on GPS/Bluetooth data, displayed on VMS boards around Worcester City on A4440 as part of wider improvement works.	Worcestershire County Council	2014	2015	Increase in number of vehicles staying on A4440 to reach destination rather than diverting through the City in search of a "quicker" route. Reduction in number of strategic trips through the city centre	1%-5%	JTMS planned as part of wider A4440 improvement works. Will be installed by June 2015	JTMS planned as part of wider A4440 improvement works. Will be installed by June 2016
Non Action Plan Measure – relevant to air quality but not directly impacting an AQMA.	Worcester City Centre Transport Model	Obtain a Worcester City Centre Transport Model to allow assessment of various options for Worcester City Centre	Worcestershire County Council	2014	2015	Development of Worcester City Centre Transport Model	0%	Funding obtained by Worcestershire County Council for development of a Worcester City Centre Transport Model to inform development of a Worcester City Centre Masterplan and combined Low Emission Strategy	Funding obtained by Worcestershire County Council for development of a Worcester City Centre Transport Model to inform development of a Worcester City Centre Masterplan and combined Low Emission Strategy

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
Non Action Plan Measure – relevant to air quality but not directly impacting an AQMA.	Installation of noise and pollution bund along A4440 at Whittington	Whittington identified as area which may require detailed assessment in the future. As part of A4440 improvement works Worcestershire County Council are proposing to install a noise and pollution bund where gaps in the existing bund are present to provide protection to the residential properties beyond.	Worcestershire County Council	2014-2015	2031	Installation of appropriate noise and pollution bund. Improvement in monitoring NO2 levels at properties protected by bund.	1-2%	Funding obtained for installation of bund. Installation of bund confirmed in wider A4440 improvement plans.	Funding obtained for installation of bund. Installation of bund confirmed in wider A4440 improvement plans.
Non Action Plan Measure – relevant to air quality but not directly impacting an AQMA.	Signal improvements along Barbourne Road and The Tything	Upgrading of old signal system along Barbourne Road and The Tything to provide intelligent system to improve congestion and manage traffic flows.	Worcestershire County Council	2015-2016	2017	Improved flow of traffic along arterial route into city centre. Reduced congestion and queuing time.	currently unknown	Upgrading of signal system incorporated into County Plan and funding available.	Upgrading of signal system incorporated into County Plan and funding available.
Non Action Plan Measure – relevant to air quality but not directly impacting an AQMA.	Improvement/enhancement of highway network within vicinity of Shrub Hill rail station.	Rationalisation of highway network in vicinity of Shrub Hill station to improve flow and reduce congestion.	Worcestershire County Council	medium-term	medium-term	Improved flow of traffic on local network, reduced congestion and queuing time.	currently unknown	Improvement/enhancement work forms part of medium-term plan for County Council	Improvement/enhancement work forms part of medium-term plan for County Council

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
NAWC1	Develop and implement Worcester City Centre Masterplan and combined Low Emission Strategy	Worcester City Council in conjunction with Worcestershire County Council to develop a City Centre Masterplan, WRS to facilitate development and implementation of a Low Emission Strategy to be combined with the City Centre Masterplan	Worcester City Council with Worcestershire County Council	2014 onwards	currently unknown due to infancy of scheme	Formal adoption and implementation of City Centre Masterplan and Low Emission Strategy	Currently unknown - will depend on the measures put in place as part of the Low Emission Strategy and wider Masterplan. Estimate emission reduction could be as high as 40%	Steering Group identified that root issue for Worcester City is a lack of a Masterplan for the City Centre. The Group agree that best way forward is to promote and facilitate the development and implementation of a Masterplan for Worcester City with a combined Low Emission Strategy to incorporate provision for bus quality partnerships.	Steering Group and Worcestershire County Council have been promoting and discussing the need for a city centre Masterplan and Low Emission Strategy at various forums with Worcester City Council. It is essential to secure political will and support for this action to succeed.
5.3.8	Promote and support walking and cycling initiatives in Worcestershire	Imitative to encourage the uptake of walking and cycling by promoting the benefits using various packages such as The Chose How You Move Initiative	County Council, District Council, Climate Change Officer	2015-2016	Easter 2015 onwards	Change in behaviour to more sustainable modes of transport e.g. walking, cycling, public transport	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.3.4	Promote flexible working arrangements	Promotion of flexible working arrangements with local businesses to include working from home opportunities, staggered start times etc.	Worcestershire County Council, Wychavon District Council	2014-2016	Easter 2015 onwards.	Increase in use of flexible working arrangements with local businesses.	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2016
5.1.4	Variable Message Signage (includes traffic info, car park info, bus and rail connection info etc.) Could be used in combination with Park and Ride schemes etc.	Use of VMS to encourage use of alternative modes of transport or direct drivers to car parks with spaces to avoid unnecessary journeys between car parks	County Council, District Council	2016 onwards	2017 onwards	Increase in number of VMS boards, increased uptake of alternative modes of transport	1-2%	Worcestershire County Council has installed VMS boards to direct drivers to car parks with free spaces in recent years, this has reduced the number of trips being made between car parks as drivers look for spaces. County Council currently progressing scheme to provide VMS boards in bus stops along major routes in the city to provide real time travel information. Inclusion of VMS real time travel information boards has been secured as part of development of a new Waitrose on London Road.	Worcestershire County Council has installed VMS boards to direct drivers to car parks with free spaces in recent years, this has reduced the number of trips being made between car parks as drivers look for spaces. County Council currently progressing scheme to provide VMS boards in bus stops along major routes in the city to provide real time travel information. Inclusion of VMS real time travel information boards has been secured as part of development of a new Waitrose on London Road.

## Action Plan Progress – LOWESMOOR, WORCESTER AQMA

**Table 3.6.5 – Feasible Non-Progressed Non-Priority Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix but remain feasible actions to be considered in the future or as and when opportunities arise.

No.	Measure	Focus	Lead Authority	Comments
5.2.12	Signage identifying AQMA	Encourage strategic traffic to avoid travelling through the AQMA and directing traffic via other routes by advertising location of the AQMA on signage	County Highways	
5.6.2	Influence Climate Change Strategy actions	There is a strong link between climate change strategy and air quality. Acknowledge this link by feeding air quality into climate change strategy	District Council	Will be progresses as and when consultation opportunities relating to Climate Change Strategies arise.
5.2.6	Low Emission Zones	Introduction of a low emission zone for buses in Lowesmor	County Council, District Council	Possible LEZ for buses discussed as part of initial Low Emission Bus Scheme bid initiation meeting – likely that operators would face LEZ if not willing to voluntarily improve fleets.
5.1.8	Introduction of traffic signals at roundabouts	Introduction of traffic signals at roundabouts	County Council	
5.6.5	Lobby and support government to ensure the manufacture and use of cleaner vehicles and fuels	Lobby and support government to ensure the manufacture and use of cleaner vehicles and fuels	County Council, District Council	
5.2.3	Park and Ride Schemes	Introduction/maintenance of park and ride schemes to encourage people not to drive in to the city centre	District Council, County Council	Existing park and ride schemes were formally closed by Worcester City Council in 2014
5.1.6	Priority bus and high occupancy vehicle (HOV) lanes and corridors	Encourage bus use and car sharing by providing priority lanes for such vehicles	County Council, District Council	
5.1.2	Change carriageway from two ways to one way. Consider inclusion of dedicated bus lane/cycle lane etc.	Change carriageway from two ways to one way. Consider inclusion of dedicated bus lane/cycle lane etc.	County council	
5.3.5	Workplace parking charging schemes	Discourage workers from driving to city centre places of work by introducing car park charging schemes for workplaces	District Council, County Council, Local businesses	
5.6.4	Lobby and support government to subsidise public transport	Encourage use of public transport by making it cheaper and therefore more attractive	County Council, District Council	
5.6.6	Lobby and support government to adopt policies to carry out nationally targeted green transport initiatives	Encourage uptake of sustainable modes of transport through green transport initiatives	District Council, County Council	

5.1.3	HGV or weight restriction on affected roads	Reduce volume of HGVs in area by introducing and/or enforcing weight restriction TROs	County Council, District Council	
5.2.9	Introducing differential parking rates - air quality event	Discourage people from driving in to the city during times of poor air quality by introducing variable parking rates that are much higher during a poor air quality event	County Council, District Council	
5.1.10	Pedestrianisation of streets within area	Eliminate vehicle emissions from area by preventing vehicular access (with delivery vehicle etc. exemptions)	County Council, District Council	
5.6.7	Removal of receptors from air quality management areas	Remove residential housing from area therefore effectively removing sensitive receptors	County Council, District Council	Likely not feasible but yet to be fully assessed.
5.5.5	Compulsory Purchase Schemes	Removal of receptors and/or street canyon through compulsory purchase of property.	District Council	Likely not feasible but yet to be fully assessed.
5.2.11	Roadside emissions testing	Improve emissions by spot testing vehicles at the roadside in joint operations with VOSA and the Police	District Council	
5.5.2	Formula for s106 (or CIL) contribution towards mitigation measures and programmes	Development of consistent formula for calculating s106 or CIL contributions from developers (damage costs)	District Council	
5.6.1	Air quality policies in Local Development Plans	Link air quality policies to local development plans	District Council	Will be progresses as and when consultation opportunities relating to Local Development Plans arise.
5.3.3	Promote teleconferencing and encourage uptake	Promote teleconferencing and encourage uptake	District Council, County Council	
5.1.12	Removal of parking bays in affected streets	Improve flow by removing any existing parking bays	County Council	
5.1.13	Alterations to parking provision and pricing (may result in decrease car use and increase uptake of public transport)	Discourage driving in to city and encourage use of public transport, walking and cycling.	District Council, County Council	
5.1.14	Traffic calming measures (aim is to deter drivers using route)	Discourage drivers from using the route	County Council	
5.2.7	Introduce fixed penalty notices for stationary idling	Discourage stationary idling	District Council, County Council	
5.2.8	Introduce differential parking rates - engines	Encourage drivers of higher emission vehicles from driving in to city centre	District Council, County Council	
5.3.6	Improve cycling and walking routes in local areas	Encourage use of cycling and walking routes by improving provision and quality	County Council	
5.3.10	Car Clubs	Promotion of alternative modes of transport through organisation and personal travel planning	County Council, District Council	
5.4.1	Smarter Driving Tips	Reduce emissions through driver education	County Council, District Council	
5.4.2	Provide link to real time air quality information	Provision of air quality info and health advice to vulnerable groups/individuals	District Council	
5.4.3	Establish an Air Quality Alert System	Provision of air quality info and health advice directly to vulnerable groups/individuals	District Council	
LRH2	Current boundary of AQMA requires amendment to conform with best practice guidance and extension to include	Current boundary of AQMA requires amendment to conform with best practice guidance and extension to include properties recommended in FA	WRS	

	properties recommended in FA			
LRH10	Recorded data needs working back to facades of properties	Reassessment of data back to facades to give more accurate representation of situation	District Council	Completed for recent monitoring rounds 2012 and 2013. Will be completed for 2014. Not yet completed review of historical data – not considered high priority action.
5.1.11	Remove build-out in streets to allow cars to pass simultaneously	Remove build-out in streets to allow cars to pass simultaneously	County Council	

## Action Plan Progress – LOWESMOOR, WORCESTER AQMA

**Table 3.6.6 – Non-Feasible Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix and have been discounted as unfeasible for the Lowesmoor AQMA following further consideration. [These actions will not be reported on in the future.](#)

No	Measure	Focus	Reasons Why Action Not Feasible
LRH9	Further assessment indicates reducing vehicle emissions by 50% will be an effective measure	Action relates to generic actions already included in Action Plan - see all above. Action will not be considered further.	Action relates to generic actions already included as part of action plan as detailed in tables above. Action will not be considered further.
LRH4	Street canyon effects in most parts	Removal of street canyon environment - linked to compulsory purchase schemes and removal of receptor actions above. Therefore action will not be considered further	Noted. Will not be considered further.
5.1.9	Introduce or improve feeder/merger lanes to improve flow	Action is not feasible for AQMA and therefore will not be progressed further	Lack of space to introduce feeder/merger lanes. No existing ones to improve. Action will not be considered further.
LRH1	The B4550 (Rainbow Hill) is used by commuters to avoid other congested routes to get into city	Action is not a standalone action and is linked to general actions outlined elsewhere - e.g. personal travel planning. Therefore this action will not be considered further	Action relates to generic actions already included as part of action plan as detailed in tables above. Action will not be considered further.
LRH3	Number of schools in area	Linked to general actions as outlined above - namely travel planning, staggered start times etc.	Action relates to generic actions already included as part of action plan as detailed in tables above. Action will not be considered further.
LRH8	Source apportionment indicates emissions for HDVs are greatest contributors in Lowesmoor and LDVs in Rainbow Hill	Linked to general actions as outlined above - namely freight quality and bus quality partnerships. Action is not standalone action and therefore will not be considered further	Action relates to generic actions already included as part of action plan as detailed in tables above. Action will not be considered further.
5.2.13	Tree Planting	Provision of trees to provide physical barrier or attenuation of particulate matter	Not feasible due to confirmed spaces within AQMA. Little evidence to demonstrate tree planting is effective with regard to reducing NO <sub>2</sub> .



## Action Plan Progress –RAINBOW HILL, WORCESTER AQMA

Table 3.6.7 – Progressed Actions to 30<sup>th</sup> April 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.2.1	Bus Quality Partnership (as part of a wider Worcester City Centre Accessibility Masterplan Strategy and combined Low Emission Strategy or via Low Emission Bus Scheme bid)	Reduce bus related emissions in AQMA through use of Bus Quality Partnerships (BQP) with local operators. Rainbow Hill is a key bus route in and out of the city centre and therefore buses are a significant contributor to poor air quality. As of April 2015 focus shift towards development of major Low Emission Bus Scheme (LEBS) bid.	Worcestershire County Council	For Low Emission Bus Scheme Bid 2015  For voluntary BQP if LEBS bid doesn't go forward or is unsuccessful 2016-2017	If LEBS bid successful 2016-2017  For voluntary BQP is LEBS bid doesn't go forward or is unsuccessful 2018 onwards	Elimination of lower Euro standard buses on city centre routes (which Euro Standards to be agreed should political support for such an action be secured) by as yet unknown date.  Major conversion of fleet to ULEVs.	5-25%	Sub Group identified that root issue for Worcester City is a lack of a Masterplan for the City Centre. The Group agree that best way forward is to promote and facilitate the development and implementation of a Masterplan for Worcester City with a combined Low Emission Strategy to incorporate provision for bus quality partnerships.  Initiation of LEBS bid process. Subject to support of local operators a major LEBS bid will be submitted by end October 2015.	During further Sub Group meetings the Group has considered a number of potential ideas for bus provision in Worcester City including removal of the bus station and introduction of a City Centre Bus Loop.  Initiation of LEBS bid process. Subject to support of local operators a major LEBS bid will be submitted by end October 2015
5.1.5/LRH5	Loading and unloading restrictions during peak traffic times	Creation and implementation of TRO to restrict loading and unloading during peak times	Worcestershire County Council, District Council	2015-2016	2018-2019	Introduction and implementation of TRO during peak times. Reduced incidence of loading and unloading during peak times and therefore improved flow/reduced congestion.	2-5%	Identified as priority action following completion of WRS prioritisation matrix. Discussed by Steering Group who agreed action to be investigated further. No further action.	Identified as priority action following completion of WRS prioritisation matrix. Discussed by Steering Group who agreed action to be investigated further. No further action.

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.6.9	Development of a Low Emission Strategy for Worcestershire	Development and implementation of low emission strategy to contain a variety of strategies aimed at reducing emissions.	Worcestershire County Council and Worcester City Council	2014 onwards	currently unknown due to infancy of scheme	Formal adoption and implementation of Low Emission Strategy	Currently unknown - dependant on what measures are included in any Low Emission Strategy and if political support for a Low Emission Strategy can be secured.	Worcestershire County Council Highways technical discussion paper received and reviewed. Identified wider transport planning issues with Worcester City centre which are intrinsically linked to air quality. There is no existing Masterplan for Worcester City centre. Steering Group members agree that a Worcester City Centre Masterplan with a combined Low Emission Strategy is appropriate way forward.	Relevant interested Steering Group members met for a second time and support was given for the promotion of the idea of a Worcester City Centre Masterplan with a combined Low Emission Strategy. Work towards promoting such a strategy with the aim of securing political support is in its infancy. In February 2015 air quality issues were promoted at the City Council Congestion Review & Scrutiny Group and the idea of a combined Masterplan and Low Emission Strategy mooted. There was general agreement with this approach.
5.2.4	Railway Enhancements	Improvements to trains, stations, services etc. to encourage and facilitate increased use of rail travel	Worcestershire County Council, Network Rail	2013	2018	Completion of new Worcester Parkway rail station. Increased use of Worcester Foregate Street station following refurbishment.	<1%	Refurbishment of Worcester Foregate Street train station has recently taken place and a new Railway Station - to be called Worcester Parkway - has been approved and is scheduled to be completed in 2017.	A new Railway Station - to be called Worcester Parkway - has been approved and is scheduled to be completed in 2017.

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.3.1	Travel Planning	Promotion of alternative modes of transport through business and personal travel planning	Worcestershire County Council	2014-2015	Easter 2015 onwards.	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015
5.2.10	Installing electric vehicle charging points	Encourage and facilitate use of electric vehicles through increased provision of charging points	Worcester City Council, Worcestershire County Council	2013	2014 onwards	Increase in availability of EV charging points and corresponding increase in use of electric vehicles	1.50%	Installation of EV charging points are routinely recommended by WRS for inclusion on relevant planning consents to all LPAs in Worcestershire. Two EV charging points are available in St Martins Gate City Council car park.	Worcestershire Regulatory Services is currently working towards formalising air quality recommendations as policy with the various Worcestershire LPAs
5.5.4	Encourage developers to provide sustainable transport facilities and links serving new developments	Encourage and facilitate uptake of sustainable modes of transport where new developments are proposed	Worcester City Council, Worcestershire County Council	2013	2014 onwards	Greater provision of sustainable transport facilities and links servicing new developments	<1%	Installation of electric vehicle charging points, or EV ready points and provision of secure cycle stores is routinely recommended by Worcestershire Regulatory Services through the planning consultation process. In addition Worcestershire County Council are rolling out a personalised travel planning service to new developments from Easter 2015	Installation of electric vehicle charging points, or EV ready points and provision of secure cycle stores is routinely recommended by Worcestershire Regulatory Services through the planning consultation process. In addition Worcestershire County Council are rolling out a personalised travel planning service to new developments from Easter 2015

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.3.2	Encourage car sharing	Promote development and use of car sharing through potential County-wide personal travel planning service	Worcestershire County Council	2014-2015	Easter 2015 onwards.	Increase in number of people car sharing	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	5.3.2
5.3.7	Install secure cycle parking shelters	Encourage cycling as a mode of transport into the city centre	Worcestershire County Council	2015-2016	2015 onwards	Increase in number of secure cycle parking shelters in City, increase in use of secure cycle parking shelters	<1%	Worcestershire County Council has advised whilst Worcester City currently has excellent provision of secure cycle parking shelters they are at capacity and more are required. Additional secure cycle parking shelters are currently planned	5.3.7
5.2.5	Greening Council and Business Fleets	Secure use of "cleaner" fuels/higher Euro standard vehicles for Council and Business fleets. Support bid for installation of CNG facility in Worcestershire	Worcestershire County Council, in combination with the District Councils	2015-2016	2016 onwards	Increase in number of Council and business fleet vehicles of higher Euro Standard and/or utilising alternative fuels	<1%	Steering Group supporting a joint OLEV bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for funding to carry out feasibility studies for the installation of a compressed natural gas filling facility in Worcestershire, and three sites in Birmingham.	Proposals for joint bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for the installation of a compressed natural gas filling facility in Worcestershire. Although not specifically applicable to WC such a facility may offer the opportunity for improvements to other Districts.

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.5.3	Encourage uptake of employer and residential travel plans for major employers and new developments to area	Promotion of alternative modes of transport through organisation and personal travel planning	Worcestershire County Council, Worcester City Council	2015-2016	Easter 2015 onwards.	Increase in uptake of personal travel planning services. Change in behaviour towards more sustainable modes of transport.	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015
5.2.2	Freight Quality Partnership (work with sat nav providers)	Encourage freight vehicles to avoid AQMA and find alternative routes through work with sat nav data providers to ensure freight is routinely routed around AQMA	Worcestershire County Council	2015	2016 onwards	Significant reduction of strategic freight diverted away from AQMA.	5-25%	Steering Group identified that use of Worcestershire County Council Lorry Route Advisory Map has declined significantly in recent years due to now almost universal use of sat nav systems. Group agree should focus on working with sat nav data providers to ensure that HGVs are routinely routed around AQMA.	Steering Group identified that use of Worcestershire County Council Lorry Route Advisory Map has declined significantly in recent years due to now almost universal use of sat nav systems. Group agree should focus on working with sat nav data providers to ensure that HGVs are routinely routed around AQMA.

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.4.5	Raise the profile and increase awareness of air quality within the region	Raise the profile and increase awareness of air quality within the region	Worcester City Council, Worcestershire County Council	2013	2014 onwards	Increased awareness at District, County and general public levels of air quality issues across the County	<1%	The inception of the Air Quality Steering Group and ongoing liaison with Worcestershire County Council has resulted in increased awareness of air quality issues and what they mean within the district and county councils. Work undertaken at Lowesmoor in Worcester City following the inception of the Lowesmoor "Air Pollution Control Zone" and associated enforcement of existing TROs resulted in local press coverage and a general increase in awareness of air quality issues with the general public.	
5.3.9	Smarter Choices - Choose How You Move marketing initiatives	Promotion of alternative modes of transport through organisation and personal travel planning	Worcestershire County Council, in combination with Worcester City Council.	2002-2003	2004	Change in behaviour towards more sustainable modes of transport.	<1%	More recently Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for roll out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015
5.4.4	Make air quality information more available and accessible	Proactive publication of information on WRS website	WRS	2013 onwards	2013 onwards	Improved availability of air quality information. More information proactively published on website.	<1%	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.	All LAQM reports to DEFRA from 2010 now available via WRS website along with general air quality information, steering group information and information about the AQMAs.

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.5.1	Produce Air Quality Supplementary Planning Document	Provide consistent approach to planning application and mitigation through production and adoption of Supplementary Planning Document for Air Quality	WRS	2014	2015 onwards	Formally adopted and utilised AQ SPD at all six LPAs across Worcestershire	<1%	Development of SPD for Air Quality started and on-going	Development of SPD for Air Quality started and on-going
5.6.3	Air Quality Networks	Collaboration between networks of neighbouring local authorities to tackle air quality in their area	Worcester City Council, WRS	2014	2014 onwards	Improved cross boundary working between local authorities in Worcestershire	<1%	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.	WRS represents the air quality interests of the six district authorities across Worcestershire. This has allowed for better management of data, reporting and action planning across Worcestershire by allowing a more cohesive approach.
5.6.8	Forge closer links with local health agencies	Improve relationships with health agencies to ensure public health aspect of air quality continues to be relevant	Worcester City Council, WRS	2014	2014 onwards	Participation of relevant health agencies in the Worcestershire Air Quality Steering Group	<1%	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date	Relevant health agencies continue to be invited to participate in the Worcestershire Air Quality Steering Group. Following initial interest there has been no representation at the Steering Group to date
Non Action Plan Measure – relevant to air quality but not directly impacting an AQMA.	Introduction of a Journey Time Management System (JTMS) around A4440.	Real time journey time information, based on GPS/Bluetooth data, displayed on VMS boards around Worcester City on A4440 as part of wider improvement works.	Worcestershire County Council	2014	2015	Increase in number of vehicles staying on A4440 to reach destination rather than diverting through the City in search of a "quicker" route. Reduction in number of strategic trips through the city centre	1%-5%	JTMS planned as part of wider A4440 improvement works. Will be installed by June 2015	JTMS planned as part of wider A4440 improvement works. Will be installed by June 2016

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
Non Action Plan Measure – relevant to air quality but not directly impacting an AQMA.	Worcester City Centre Transport Model	Obtain a Worcester City Centre Transport Model to allow assessment of various options for Worcester City Centre	Worcestershire County Council	2014	2015	Development of Worcester City Centre Transport Model	0%	Funding obtained by Worcestershire County Council for development of a Worcester City Centre Transport Model to inform development of a Worcester City Centre Masterplan and combined Low Emission Strategy	Funding obtained by Worcestershire County Council for development of a Worcester City Centre Transport Model to inform development of a Worcester City Centre Masterplan and combined Low Emission Strategy
Non Action Plan Measure – relevant to air quality but not directly impacting an AQMA.	Installation of noise and pollution bund along A4440 at Whittington	Whittington identified as area which may require detailed assessment in the future. As part of A4440 improvement works Worcestershire County Council are proposing to install a noise and pollution bund where gaps in the existing bund are present to provide protection to the residential properties beyond.	Worcestershire County Council	2014-2015	2031	Installation of appropriate noise and pollution bund. Improvement in monitoring NO2 levels at properties protected by bund.	1-2%	Funding obtained for installation of bund. Installation of bund confirmed in wider A4440 improvement plans.	Funding obtained for installation of bund. Installation of bund confirmed in wider A4440 improvement plans.
Non Action Plan Measure – relevant to air quality but not directly impacting an AQMA.	Signal improvements along Barbourne Road and The Tything	Upgrading of old signal system along Barbourne Road and The Tything to provide intelligent system to improve congestion and manage traffic flows.	Worcestershire County Council	2015-2016	2017	Improved flow of traffic along arterial route into city centre. Reduced congestion and queuing time.	currently unknown	Upgrading of signal system incorporated into County Plan and funding available.	Upgrading of signal system incorporated into County Plan and funding available.



No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
Non Action Plan Measure – relevant to air quality but not directly impacting an AQMA.	Improvement/enhancement of highway network within vicinity of Shrub Hill rail station.	Rationalisation of highway network in vicinity of Shrub Hill station to improve flow and reduce congestion.	Worcestershire County Council	medium-term	medium-term	Improved flow of traffic on local network, reduced congestion and queuing time.	currently unknown	Improvement/enhancement work forms part of medium-term plan for County Council	Improvement/enhancement work forms part of medium-term plan for County Council
NAWC1	Develop and implement Worcester City Centre Masterplan and combined Low Emission Strategy	Worcester City Council in conjunction with Worcestershire County Council to develop a City Centre Masterplan, WRS to facilitate development and implementation of a Low Emission Strategy to be combined with the City Centre Masterplan	Worcester City Council with Worcestershire County Council	2014 onwards	currently unknown due to infancy of scheme	Formal adoption and implementation of City Centre Masterplan and Low Emission Strategy	Currently unknown - will depend on the measures put in place as part of the Low Emission Strategy and wider Masterplan. Estimate emission reduction could be as high as 40%	Steering Group identified that root issue for Worcester City is a lack of a Masterplan for the City Centre. The Group agree that best way forward is to promote and facilitate the development and implementation of a Masterplan for Worcester City with a combined Low Emission Strategy to incorporate provision for bus quality partnerships.	Steering Group and Worcestershire County Council have been promoting and discussing the need for a city centre Masterplan and Low Emission Strategy at various forums with Worcester City Council. It is essential to secure political will and support for this action to succeed.

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.3.8	Promote and support walking and cycling initiatives in Worcestershire	Initiative to encourage the uptake of walking and cycling by promoting the benefits using various packages such as The Chose How You Move initiative	County Council, District Council, Climate Change Officer	2015-2016	Easter 2015 onwards	Change in behaviour to more sustainable modes of transport e.g. walking, cycling, public transport	1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2015
5.3.4	Promote flexible working arrangements	Promotion of flexible working arrangements with local businesses to include working from home opportunities, staggered start times etc.	Worcestershire County Council, Wychavon District Council	2014-2016	Easter 2015 onwards.	Increase in use of flexible working arrangements with local businesses.	<1%	Worcestershire County Council, in conjunction with district councils, has previously run Choose How You Move campaigns in Worcester and more recently in Redditch. The recent Redditch programme produced positive results in terms of modal shift following personal travel planning sessions with local residents. County Council are currently exploring the provision of personal travel planning service for role out across the County. The service will charge developers for the delivery of travel plans at new developments.	The County Council team developing the service have developed a charging scheme and the remit of the service and will begin roll out with the South Worcester Development Plan developments from Easter 2016

No.	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target Annual Emission Reduction in the AQMA	Progress to Date	Progress in Last 12 Months
5.1.4	Variable Message Signage (includes traffic info, car park info, bus and rail connection info etc.) Could be used in combination with Park and Ride schemes etc.	Use of VMS to encourage use of alternative modes of transport or direct drivers to car parks with spaces to avoid unnecessary journeys between car parks	County Council, District Council	2016 onwards	2017 onwards	Increase in number of VMS boards, increased uptake of alternative modes of transport	1-2%	Worcestershire County Council has installed VMS boards to direct drivers to car parks with free spaces in recent years, this has reduced the number of trips being made between car parks as drivers look for spaces. County Council currently progressing scheme to provide VMS boards in bus stops along major routes in the city to provide real time travel information. Inclusion of VMS real time travel information boards has been secured as part of development of a new Waitrose on London Road.	Worcestershire County Council has installed VMS boards to direct drivers to car parks with free spaces in recent years, this has reduced the number of trips being made between car parks as drivers look for spaces. County Council currently progressing scheme to provide VMS boards in bus stops along major routes in the city to provide real time travel information. Inclusion of VMS real time travel information boards has been secured as part of development of a new Waitrose on London Road.

## Action Plan Progress – RAINBOW HILL, WORCESTER AQMA

### Table 3.6.8 – Feasible Non-Progressed Non-Priority Actions to 30<sup>th</sup> April 2015

These actions were not identified as priority actions following completion of the prioritisation matrix but remain feasible actions to be considered in the future or as and when opportunities arise.

No.	Measure	Focus	Lead Authority	Comments
5.2.9	Introducing differential parking rates - air quality event	Discourage people from driving in to the city during times of poor air quality by introducing variable parking rates that are much higher during a poor air quality event	County Council, District Council	
5.6.7	Removal of receptors from air quality management areas	Remove residential housing from area therefore effectively removing sensitive receptors	County Council, District Council	Likely not feasible but yet to be fully assessed.

5.2.6	Low Emission Zones	Introduction of a low emission zone for buses in Rainbow Hill	County Council, District Council	Possible LEZ for buses discussed as part of initial Low Emission Bus Scheme bid initiation meeting – likely that operators would face LEZ if not willing to voluntarily improve fleets.
5.1.3	HGV or weight restriction on affected roads	Reduce volume of HGVs in area by introducing and/or enforcing weight restriction TROs	County Council, District Council	
5.5.5	Compulsory Purchase Schemes	Removal of receptors and/or street canyon through compulsory purchase of property.	District Council	Likely not feasible but yet to be fully assessed.
5.6.6	Lobby and support government to adopt policies to carry out nationally targeted green transport initiatives	Encourage uptake of sustainable modes of transport through green transport initiatives	District Council, County Council	
5.1.8	Introduction of traffic signals at roundabouts	Introduction of traffic signals at roundabouts	County Council	
5.3.5	Workplace parking charging schemes	Discourage workers from driving to city centre places of work by introducing car park charging schemes for workplaces	District Council, County Council, Local businesses	
5.6.4	Lobby and support government to subsidise public transport	Encourage use of public transport by making it cheaper and therefore more attractive	County Council, District Council	
5.6.5	Lobby and support government to ensure the manufacture and use of cleaner vehicles and fuels	Lobby and support government to ensure the manufacture and use of cleaner vehicles and fuels	County Council, District Council	
5.3.3	Promote teleconferencing and encourage uptake	Promote teleconferencing and encourage uptake	District Council, County Council	
5.1.7	Improvement of signage for traffic to avoid AQMA	Encourage strategic traffic to avoid travelling through the AQMA and directing traffic via other routes	County Highways	
5.2.11	Roadside emissions testing	Improve emissions by spot testing vehicles at the roadside in joint operations with VOSA and the Police	District Council	
5.5.2	Formula for s106 (or CIL) contribution towards mitigation measures and programmes	Development of consistent formula for calculating s106 or CIL contributions from developers (damage costs)	District Council	
5.6.1	Air quality policies in Local Development Plans	Link air quality policies to local development plans	District Council	Will be progresses as and when consultation opportunities relating to Local Development Plans arise.
5.6.2	Influence Climate Change Strategy actions	There is a strong link between climate change strategy and air quality. Acknowledge this link by feeding air quality into climate change strategy	District Council	Will be progresses as and when consultation opportunities relating to Climate Change Strategies arise.
5.1.1	Alteration to phasing of traffic light systems	Explore alteration of traffic light phasing for signal systems within and affecting AQMA	County Council	
5.1.11	Remove build-out in streets to allow cars to pass	Remove build-out in streets to allow cars to pass simultaneously	County Council	

	simultaneously			
5.1.12	Removal of parking bays in affected streets	Improve flow by removing any existing parking bays	County Council	
5.1.13	Alterations to parking provision and pricing (may result in decrease car use and increase uptake of public transport)	Discourage driving in to city and encourage use of public transport, walking and cycling.	District Council, County Council	
5.1.14	Traffic calming measures (aim is to deter drivers using route)	Discourage drivers from using the route	County Council	
5.2.3	Park and Ride Schemes	Introduction/maintenance of park and ride schemes to encourage people not to drive in to the city centre	District Council, County Council	Existing park and ride schemes were formally closed by Worcester City Council in 2014
5.2.7	Introduce fixed penalty notices for stationary idling	Discourage stationary idling	District Council, County Council	
5.2.8	Introduce differential parking rates - engines	Encourage drivers of higher emission vehicles from driving in to city centre	District Council, County Council	
5.2.12	Signage identifying AQMA	Encourage strategic traffic to avoid travelling through the AQMA and directing traffic via other routes by advertising location of the AQMA on signage	County Highways	
5.3.6	Improve cycling and walking routes in local areas	Encourage use of cycling and walking routes by improving provision and quality	County Council	
5.3.10	Car Clubs	Promotion of alternative modes of transport through organisation and personal travel planning	County Council, District Council	
5.4.1	Smarter Driving Tips	Reduce emissions through driver education	County Council, District Council	
5.4.2	Provide link to real time air quality information	Provision of air quality info and health advice to vulnerable groups/individuals	District Council	
5.4.3	Establish an Air Quality Alert System	Provision of air quality info and health advice directly to vulnerable groups/individuals	District Council	
LRH2	Current boundary of AQMA requires amendment to conform with best practice guidance and extension to include properties recommended in FA	Current boundary of AQMA requires amendment to conform with best practice guidance and extension to include properties recommended in FA	WRS	
LRH6	Number of bus routes and non pull-in stops in AQMA	Move bus stops out of AQMA or create pull-in stops (if feasible) to improve flow.	County Council	
LRH7	Traffic lights onto Lowesmoor Terrace cause congestion	During consultation County Council advised that congestion caused by contravention of existing TRO that restricts traffic eastbound through Lowesmoor during afternoon peak times - improve enforcement of existing TRO	County Council	
LRH10	Recorded data needs working back to facades of properties	Reassessment of data back to facades to give more accurate representation of situation	District Council	
5.1.2	Change carriageway from two ways to one way. Consider inclusion of dedicated bus lane/cycle lane etc.	Change carriageway from two ways to one way. Consider inclusion of dedicated bus lane/cycle lane etc.	County council	
5.1.6	Priority bus and high occupancy vehicle (HOV) lanes and corridors	Encourage bus use and car sharing by providing priority lanes for such vehicles	County Council, District Council	

## Action Plan Progress – RAINBOW HILL, WORCESTER AQMA

**Table 3.6.9 – Non-Feasible Actions to 30<sup>th</sup> April 2015**

These actions were not identified as priority actions following completion of the prioritisation matrix and have been discounted as unfeasible for the Rainbow Hill AQMA following further consideration. These actions will not be reported on in the future.

No	Measure	Focus	Reasons Why Action Not Feasible
LRH9	Further assessment indicates reducing vehicle emissions by 50% will be an effective measure	Action relates to generic actions already included in Action Plan - see all above. Action will not be considered further.	Action relates to generic actions already included as part of action plan as detailed in tables above. Action will not be considered further.
5.1.10	Pedestrianisation of streets within area	Eliminate vehicle emissions from area by preventing vehicular access (with delivery vehicle etc. exemptions)	Not feasible based on configuration of local highway network and arterial route nature of AQMA.
LRH4	Street canyon effects in most parts	Removal of street canyon environment - linked to compulsory purchase schemes and removal of receptor actions above. Therefore action will not be considered further	Noted. Will not be considered further.
5.1.9	Introduce or improve feeder/merger lanes to improve flow	Action is not feasible for AQMA and therefore will not be progressed further	Lack of space to introduce feeder/merger lanes. No existing ones to improve. Action will not be considered further.
LRH1	The B4550 (Rainbow Hill) is used by commuters to avoid other congested routes to get into city	Action is not a standalone action and is linked to general actions outlined elsewhere - e.g. personal travel planning. Therefore this action will not be considered further	Action relates to generic actions already included as part of action plan as detailed in tables above. Action will not be considered further.
LRH3	Number of schools in area	Linked to general actions as outlined above - namely travel planning, staggered start times etc.	Action relates to generic actions already included as part of action plan as detailed in tables above. Action will not be considered further.
LRH8	Source apportionment indicates emissions for HDVs are greatest contributors in Lowesmoor and LDVs in Rainbow Hill	Linked to general actions as outlined above - namely freight quality and bus quality partnerships. Action is not standalone action and therefore will not be considered further	Action relates to generic actions already included as part of action plan as detailed in tables above. Action will not be considered further.
5.2.13	Tree Planting	Provision of trees to provide physical barrier or attenuation of particulate matter	Not feasible due to confirmed spaces within AQMA. Little evidence to demonstrate tree planting is effective with regard to reducing NO2.

## **4 Conclusions and Proposed Actions**

### **4.1 Conclusions from progress to date**

Since the formal adoption of the Air Quality Action Plan for Worcestershire all actions have undergone prioritisation and those actions identified as a priority have been subject to detailed review by both WRS and Worcestershire County Council.

A Steering Group, and associated Sub-Groups, have been set up, and whilst interest in participation from key stakeholders has been limited, those involved have worked towards progressing priority actions for each of the existing AQMAs.

Significant progress has been made in a number of key areas, namely:

- The implementation of the Lowesmoor Air Pollution Control Zone and subsequent reductions in traffic travelling through the AQMA.
- The initiation of a major bid to the Low Emission Bus Scheme for the Worcester City area with the aim of transforming the existing bus fleet to ultra low emission vehicles.
- Development of a scheme for transport modelling and trial of junction re-configuration at Port Street, Evesham with the aim of reducing congestion and the number of vehicles held inside the AQMA.
- The potential for a joint bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for the installation of a compressed natural gas filling facility and pipeline infrastructure in Worcestershire has been made.
- Junction remodelling and signal equipment improvements have been undertaken at the Hagley island junction (A456 and A491).

Following adoption of the Action Plan engagement mechanisms with Worcestershire County Council have been significantly improved. The appointment of a new formal County Council representative for air quality has resulted in progression of a number of key projects, including the implementation of the Lowesmoor Air Pollution Control Zone, the Port Street junction re-configuration and initiation of a major bid to the Low Emission Bus Scheme for the Worcester City area. Successful engagement with Worcestershire County Council is key to solving the issues in existing AQMAs as the key issues are all linked to transport.

## 4.2 Proposed actions going forward

Over the next twelve months, to end March 2016, it is proposed to complete the following:

### St. Johns, Worcester AQMA

Development of an Action Plan for the recently declared St. Johns, Worcester AQMA. This will include undertaking a source apportionment study and subsequent application of the prioritisation matrix to determine priority actions to be progressed. To be completed by December 2015.

### Worcester City AQMAs

- Support Worcestershire County Council in completion of Low Emission Bus Scheme bid by end October 2015.
- Be Supportive of Worcestershire County Council enforcement cameras in the Lowesmoor Air Pollution Control Zone.
- Support Worcestershire County Council and Worcester City Council in promoting and planning for a city centre Masterplan and associated Low Emission Strategy by end March 2016.
- Following receipt of the previously discussed Worcestershire County Council Discussion Papers and subsequent Sub Group meetings the following new action was identified for the three Worcester City AQMAs:  
*NAWC1 – develop and implement a Worcester City Centre Masterplan and combined Low Emission Strategy.* This action will be put through the



prioritisation matrix by end March 2016. Sub Group has previously agreed the action should be a priority action for Worcester City.

#### Horsefair, Kidderminster AQMA

- Aim to improve stakeholder involvement in the Sub Group by end March 2016.
- Actively engage with and support implementation of the Churchfields Master Plan.
- Support Worcestershire County Council as plans come forward for the development of a Kidderminster Transport Strategy and associated overhaul of the existing Kidderminster Ringway system.

#### Port Street, Evesham AQMA

- Support Worcestershire County Council in implementation of signal removal trial at the Waterside and Workman Bridge junction by end December 2015.
- Following completion of successful signal removal trial support Worcestershire County Council in permanent removal of signals at the Waterside and Workman Bridge junction by end March 2016.
- Continue to monitor NO<sub>2</sub> via diffusion tube network to quantify improvement in air quality as a result of the above by end March 2017 (12 months monitoring data).
- Support Worcestershire County Council in further exploration of signalisation of the "Lidl" roundabout if necessary.

#### Bromsgrove Urban AQMAs (Redditch Road, Worcester Road and Lickey End)

- Steering Group to ensure air quality is represented during development of the transport packages for the Local Bromsgrove Plan.
- Engage with the Highways Agency regards modelling of transport network development to ensure efficiency.
- Explore possible funding streams for identified measures.
- Carry out prioritisation of any new identified measures as per the previously used prioritisation matrix.

- Continue to support Bromsgrove & Redditch Borough Councils in their joint bid with Birmingham City Council for the installation of a compressed natural gas filling facility and infrastructure.
- Engage and support Worcestershire County Council in their development of a long term strategic transport vision for Bromsgrove.

#### Kidderminster Road, Hagley AQMA

- Explore potential new measures that may benefit the air quality within the AQMA.
- To continue to explore improvements to identified obstacles on the transport network.
- Work towards implementation of prioritised measures.
- Pursue potential funding streams available for the implementation of any proposed measures.
- Continue to support Bromsgrove & Redditch Borough Councils in their joint bid with Birmingham City Council for the installation of a compressed natural gas filling facility and infrastructure.
- Carry out prioritisation of any new identified measures as per the previously used prioritisation matrix.
- Continue to monitor NO<sub>2</sub> via diffusion tube network to quantify improvement in air quality as a result of junction improvements.

#### Welch Gate, Bewdley AQMA

- Aim to improve stakeholder involvement in the Sub Group by end March 2016.
- Continue to support and engage with Worcestershire County Council as plans come forward for the development of a Bewdley Transport Strategy.
- To explore possible new initiatives and measures that may benefit the Welch Gate AQMA.
- Carry out prioritisation of any new identified measures as per the previously used prioritisation matrix.
- Aim to forge contacts with local bus operators in a bid to open a dialogue.

- Continue to liaise with stakeholders in exploring possible improvements to air quality.

In addition to the above AQMA specific actions WRS will report to DEFRA on progress with the implementation of the Air Quality Action Plan for Worcestershire for financial year 2015/2016 by mid-2016.

## 5 References

Defra (2007) The Air Quality Strategy for England, Wales, Scotland and Northern Ireland

Defra (2009) Local Air Quality Management Technical Guidance LAQM.TG(09)

Defra (2009b) Local Air Quality Management Policy Guidance LAQM.PG(09)

WRS (2013) Air Quality Action Plan for Worcestershire

# Appendix 1

## Action Plan Consultation Responses Summary

Following completion of the consultation process prior to formal adoption of the Air Quality Action Plan for Worcestershire a summary of consultation responses received, and subsequent comments from WRS, were published on the WRS website. These are reproduced in the tables below or available to view at <http://www.worcsregservices.gov.uk/pollution/air-quality/air-quality-action-plan.aspx>

Please be aware that comments were not received in relation to all of the AQMAs existing across Worcestershire at the time of consultation.

## Comments from Bromsgrove Consultees

Consultee	Comment Received	WRS Response	Follow up Action if Required	Included in Action Plan? Y / N
Better Environment Theme Group	From reading the AQAP. The specific solutions seem to be sensible solutions in line with the current economic climate.	No comment required	None required	No
Better Environment Theme Group	Which potential generic and specific solutions would you prefer not to be implemented in your area and why? : The weight restriction on roads seems to be an option that would not be economically viable although it is important that it has been assessed	All solutions included within the AQAP are potential options at this time. The Steering Group will determine the preferred options for each AQMA following cost-benefit-feasibility considerations of each proposed measure.	None required	Yes
Better Environment Theme Group	I believe that working with business both across county and bordering authorities would be appropriate to address specifically the single car use during peak times. Perhaps utilising some of the choose how you move tools. I think the links to Climate Change Strategy and other county and district documents is extremely sensible and hopefully shared priorities will enable actions to be delivered.	There are a number of potential Actions proposed to address the specific issue of single occupancy car movements in section 5.3 Promotion of Alternatives aimed at not just the individual but businesses across the County.	None required	Yes
BDC Air Quality Task Group	Little or no improvement to air quality appears to have been made since the implementation of three of the AQMAs (and Action Plans) in Bromsgrove.	There has only previously been an action plan in place for one of the four BDC AQMAs - the Lickey End AQMA. Actions within the countywide AQAP are yet to be prioritised and implemented by Steering Group - see timeline Section 7	None required	No
BDC Air Quality Task Group	That all though actions were being taken these appeared not to be actually addressing the problem, only mitigating its effects.	Disagree. There are a diverse range of actions included in the AQAP of which the primary aim is to reduce traffic volumes and therefore seek to address the main source of emissions.	None required	No
BDC Air Quality Task Group	That the Action Plans developed previously for the AQMAs in the District did not result in tangible improvements in those areas and the concern is that this will be the case with the latest action plan.	The contents of existing plans have been reviewed as part of the research for this AQAP to determine the success of previous proposed actions. Previous actions which have proved not to be successful have not been incorporated into the current plan. Reference to the existing AQAP for Lickey End is included in section 3.2.6	None required	No

BDC Air Quality Task Group	That air quality does not appear to be a priority in respect of strategic planning, planning applications and the town centre regeneration programme.	Acknowledge that air quality is one of many issues on the wider agenda when consideration is given for strategic planning projects, planning applications and the town centre regeneration programme. However air quality is a material consideration for planning and current, and soon to be updated, supplementary planning documents and policies allow us to ensure that air quality issues are given due consideration.	None required	No
BDC Air Quality Task Group	Improvements are needed to public transport, including its availability and the types of vehicles used.	Agree. Improvements to emissions from bus fleets are addressed in actions 5.2.1 Bus Quality Partnership and potentially as part of a Low Emission Zone action 5.2.6. Availability is not remit of LAQM and is responsibility of County Council who will be a heavily involved partner during the implementation of the action plan.	Will pass on your comments to Worcestershire County Council Highways dept. as the relevant authority responsible for public transport accessibility.	Yes
BDC Air Quality Task Group	Members believe the action plan is “unfocused” and does not have any real targets or timescales. This is due to it covering 10 AQMAs all of which have different needs. This should be broken down into more specific areas and as Bromsgrove has the greatest number of AQMAs it may be more appropriate for it to have a separate Action Plan.	A Steering Group will be formed in the New Year to determine preferred options and timescales for implementation. It is envisaged that the AQAP will be an evolving document that will be updated to incorporate relevant targets and timescales as and when they are developed and agreed by the Steering Group. A separate action plan for Bromsgrove District and steering group proposed by BDC Air Quality Task Group was rejected by BDC full council on 2nd Oct 2013.	None required	No
BDC Air Quality Task Group	How WRS could raise awareness of air quality and the successful implementation of changes as detailed in the generic actions and measure the effectiveness of those actions.	Specific measurements of success of actions will be determined by steering group work. Potentially the effectiveness of implemented solutions will be measured by changes in pollutant concentrations in AQMAs and revocation of AQMAs. However it must be recognised that traffic volume is anticipated to continue to increase on roads in UK in future years (creating additional issues that will require solutions) resulting in increasing emissions which could mask the effectiveness of any actions implemented.	Specific measurements of success of actions will be determined by steering group work.	Yes

BDC Air Quality Task Group	Clarification on whether the Steering Group will be a single steering group for all 10 Worcestershire AQMAs? If so, Members believe that this would be unmanageable due to the geographical area and as Bromsgrove has the largest number of AQMAs it would be appropriate for a Steering Group to be set up specifically for the District.	Equally managing 10 steering groups would be even more unmanageable and repetition for many of the participants such as the County Council's Highways representatives - and as such we may lose some of their input due to resource constraints. There will be a single steering group but sub work groups could be formed targeted to address specific action types. There are simply not the resources to action 10 plans and accommodate 10 steering groups. A separate action plan for Bromsgrove including Hagley and steering group proposed by BDC Air Quality Task Group was rejected by BDC full council on 2nd Oct 2013.	None required	No
BDC Air Quality Task Group	Why the decision has been made to form a steering group after the Action Plan consultation rather than before and therefore not allowing the group to assist with the development of it.	It is WRS remit as providing technical support for air quality to the LA partners to research and present the potential solutions to key individuals and organisations identified to form the Steering Group to deliver the actions. See Section 7 of the AQAP. The AQAP is not intended to be a static document and will evolve as the process progresses. The current version of the AQAP was developed to provide a robust and comprehensive starting point.	None required	No
Lickey End Resident	Thank you for the opportunity to comment on the Worcestershire Air Quality Action Plan. As a resident living with what can sometimes be the nightmare of traffic and pollution I am disappointed at some of the recommendations – or lack of them – that are in the report. Given the small number of properties affected, it would have been good to have someone speak to residents personally.	WRS did advise each resident of the approximate 1000 properties amongst the 10 AQMAs of the consultation on the AQAP documents through a leafleting campaign. Residents were advised about how they could provide their comments as well as providing copies at local LA drop in centres and libraries. Contact details for the WRS air quality officers were provided for use by anyone wishing to discuss the issues on an individual basis.	None required	No



Lickey End Resident	Make the traffic lights on the A38/M42 Island part-time. I can understand the need for traffic flow during rush hour but during the day (9.30 am to 4.00 pm) and in the evening (from 6.30 pm to 7.30 am) there is no need for the traffic lights to be on. Traffic would flow much better without traffic lights (as we often witness during the power cuts).	WCC or Highways Agency are responsible for traffic light operation at Lickey End Junction 1 of M42. Amending to part time signalling would potentially require junction modelling to fully understand the effect of part time traffic lights on congestion levels. Improvements to the junction will be actioned by County Council Highways as part of LTP3 BR2 - Bromsgrove Transport Package – Bromsgrove Eastern Bypass Junction Improvements.	None required	No
Lickey End Resident	If Traffic lights are a necessity then re-time them to make the flow of traffic better. I am not sure how or who monitors the flow of traffic but for at least the last 2 months (May & June 2013), if not longer, when you exit the M42 to turn right onto the B4096 you have to stop at both sets of lights. Holding traffic coming off the motorway is ridiculous.	WCC or Highways Agency are responsible for traffic light operation at Lickey End Junction 1 of M42. WRS will ascertain if improvements to the timing of the signals are possible with those partners as part of actions proposed in the action plan (Action 5.1.1). Improvements to junction will be actioned by County Council Highways as part of LTP3 BR2 - Bromsgrove Transport Package – Bromsgrove Eastern Bypass Junction Improvements. The second part of the statement is not relevant to the AQAP consultation.	None required	Yes
Lickey End Resident	Better use of the Box markings. Timing of the traffic lights causes frustration and one of the reasons why drivers ignore the box markings. A campaign about proper driving or better signs about leaving the box markings clear – such as the ones currently in place in other locations about taking your litter home with you.	Improvements to box markings were identified within the AQAP specific actions section LE11 Section 6. WCC advised June 2013: 'Included in the LTP3 as Scheme BR2 – Bromsgrove Transport Package – Bromsgrove Eastern Bypass Junction Improvements.' The box markings were introduced as part of the original action plan - according the 2010 AQAP progress report the action was completed in 2008 and had a positive effect on the flow of traffic - see the "Bromsgrove Update on M42 J1 Lickey End AQAP 2010 final" document on the S:/ drive	None required	Yes
Lickey End Resident	Complete revamp of the traffic island. A very costly and radical suggestion would be to fill in the motorway island and make full use of the space for a better flow of traffic.	Any significant changes to the island will require junction modelling by Worcs County Council Highways and likely to be considered as part of LTP3 Scheme BR2 – Bromsgrove Transport Package – Bromsgrove Eastern Bypass Junction Improvements.	None required	No

Lickey End Resident	If you plan to allow more housing developments such as Norton Farm and the 3,400 housing overspill from Redditch then unfortunately this junction will bear the brunt of increased traffic. Have the courage to do something about it now.	Strategic Planning for future development is responsibility of the Local Planning Authority and not part of this consultation on the AQAP. WRS provide formal advice to Local Planning Authorities on assessments and actions required to mitigate impacts on local air quality from individual and cumulative developments and will be producing (an update to the current) a revised Supplementary Planning Document to further prescribe air quality assessment and mitigation requirements to developers in 2014 - see actions 5.5.1 and 5.5.2 of AQAP.	None required	Yes
Lickey End Resident	Table 3.9 LTP3 - There is no direct bus service to the Railway station for residents living North of Bromsgrove. It involves a bus into Bromsgrove bus station and then another bus out. Would be good to gauge whether service viable and predicted usage.	Improved bus services to and from the station are planned as part of the redevelopment of Bromsgrove Train Station by Worcestershire County Council	None required	Yes
Lickey End Resident	3.2.8 Summary of key issues identified from review for consideration within actions - Issue LE1, I can understand why you would redraw the boundary to exclude gardens but for residents of 1, 3, 5, 7, 9 & 11 Old Birmingham Road it would be impossible to redraw the boundary. It would be interesting to monitor the Air Quality in some of the gardens. You are working with an assumption that the poor quality is less – might not be the case.	Noted. The revised edition of the AQAP clarifies this relates to rear of those properties. Garden areas are not representative of 'relevant exposure' as outlined in Defra's technical guidance - put simply they are not habitable areas where persons would be reasonably expected to be living 24/7. In practice the boundary will remain unamended until future monitoring and modelling indicates the AQMA can be either revoked or requires extension.	None required	Yes
Lickey End Resident	Issue LE2, Unfortunately the result of poor hereditary planning	No comment required	None required	Yes
Lickey End Resident	Issue LE3, Yes but it does allow cars to exit from Barnsley Hall Road	Noted. However improvements to flow of traffic should allow for vehicles to exit this road more easily whereas currently traffic on A38 queue at lights the vehicles exiting Barnsley Hall Road are reliant on another driver giving way.	None required	Yes
Lickey End Resident	Issue LE4, Unfortunately the result of poor hereditary planning.	No comment required	None required	Yes
Lickey End Resident	Issue LE5, Make this a left turn only	This idea does have some merits.	To Include in AQAP update	Yes
Lickey End Resident	Issue LE6, Make this a left turn only (with the exception of Ambulances and Police Cars). Anyone exiting would only need to go around the island to head towards Bromsgrove	As detailed in Section 6 actions	None required	Yes

Lickey End Resident	Issue LE7 The gateway into the Harvester is, technically, adequate but it feels quite narrow. For example if a car is waiting to exit the Harvester it is difficult to allow another car into the car park. The narrowness of the gap (whilst on paper perfectly adequate) causes cars to enter very slowly. Making the gap bigger would help this but would reduce car park spaces.	Noted. An alternative mitigation is proposed in section 6 which would eliminate the requirement to access the Harvester from the A38 altogether	None required	No
Lickey End Resident	Make the entrance on Birmingham Road an Exit only entrance and the entrance on Alcester Road both entry and exit.	WRS do not believe this is viable as the A38 Birmingham Road is a major connection to J4 of the M5. Similarly the B4096 Old Birmingham Road provides access to significant number of residential properties, schools and businesses in Lickey End. Additionally there are no obvious air quality benefits to be gained from this change.	None required	No
Lickey End Resident	Issue LE8, Make the bottom exit a No Right Turn. It is very dangerous and there have been a number of accidents. Cars leaving by the bottom exit suddenly find traffic coming quite fast as they speed up down the hill.	As detailed in Section 6 actions	None required	Yes
Lickey End Resident	Issue LE9 These markings cause a lot of confusion. Every day we hear horns blaring as driving technically cut across the lanes to get onto the M42. The whole signage around the island needs looking at.	As detailed in Section 6 actions	None required	Yes
Lickey End Resident	Issue LE11, Safety campaign about ignoring the box marking would be beneficial as well as better timing of the traffic lights.	Safety issues are responsibility of Worcs County Council Highways dept.	None required	No
Lickey End Resident	Issue LE12, It is not that many years ago since the resident of 10 Old Birmingham Road died. Whilst there is no resident in place at the moment it is used by Paul Matty Sports Cars and warrants as much consideration as the other properties.	Whilst the property is in commercial use it is not representative of relevant exposure against the Air Quality Objective as detailed in Defra Technical Guidance TG09. WRS have advised the Local Planning Authority that it is desirable the property remains a commercial property.	None required	Yes
Lickey End Resident	Issue LE13, I see that the developers of Norton Farm were asked to pay £10,000 towards the Air Quality. I am assuming that you would use those funds to further monitor the Air Quality. If that development does not go ahead and the funds not made available, is there funding in place to continue the Air Quality monitoring? How many years does the assessment have to continue until something is done?	Should the development go ahead the funds will be utilised towards a preferential measure to improve air quality as identified within the AQAP to be determined by the Steering Group. Further monitoring is not identified as an action within the AQAP.	None required	No
Lickey End Resident	LE14, Yes please – give us accurate and up to date data.	No comment required	WRS are seeking to emplace additional monitoring points for 2014	Yes

## Comments from Hagley Consultees

Consultee	Comment Received	Response	Follow up Action if Required	Included in Action Plan? Y / N
Hagley Resident	As pollution is said to rise with vehicle speeds, Why can we not have a 30mph speed limit on these sections of the roads? It has been done effectively on the single carriageway parts of the A456 in West Hagley and at Blakedown. Why not here?	Generally the opposite is true of pollution concentrations in AQMAs which is high because of the volume of idling traffic due to congestion at peak times exacerbated by local acceleration after queuing landscape conditions and local meteorological effects. The key is to improve flow and reduce congestion. It is unlikely that reduction in speed limits to 30 mph will have desired effect on emission reduction and potentially could exacerbate the pollution concentrations. Detailed modelling would allow the effects of changing average speeds (not limits) within the AQMAs to be determined.	WRS will be undertaking assessment of effects on emissions of a range of solutions identified within the AQAP for each AQMA and varying speed is an essential part of assessing air quality.	No
Hagley Resident	Why can the present speed limit of 40mph not be policed on the A456? I have not seen any form of speed control here for many years, yet the A491 has a speed camera at Pedmore and regular mobile cameras on the dual carriageway towards Lydiate Ash. This could so easily be accomplished and would yield immediate benefits. I'm sure the police will be able give you details of when they last targeted the A456.	Enforcing speed limits on A roads in Worcestershire is responsibility of Worcestershire County Council Highways dept. However policing the existing speed limit would not provide any benefit to Local air Quality management.	No Air Quality benefit	No
Hagley Resident	It is a known fact that trees, particularly saplings, can help to reduce pollution. This has been suggested to BDC in the past and they agreed to study which types would be best and instigate plantings. Why has this not been done?	WRS have researched tree planting extensively as part of the AQAP (refer Action 5.2.13) but have found no substantial authoritative industry accepted evidence that this solution provides substantial improvement in air quality.	None required	Yes

Hagley Resident	The technology now exists to make charges on vehicles with high emissions and a scheme has been running in London for some years. Why cannot this be implemented here? It may cost a bit to set up, but what is that compared to the health of the local residents.	The complexities of developing and setting up Low Emission Zones and the effectiveness for each AQMA are discussed in Action 5.2.6.	WRS propose to undertake assessment of effects on emissions of a range of solutions identified within the AQAP should a low emission zone be proposed as an appropriate measure to pursue	Yes
Hagley Resident	You could be encouraging heavy traffic to use the M6 rather than the A456. This may have to be done by active discouragement - for example by reducing speed limits, Blakedown and West Hagley could drop to 20mph. Also, the dual carriageway on the A456 could be reduced to one carriageway in each direction. This has been done extensively on the A449 which is a far less busy road than the A456.	Reductions to 20mph speed limits are discussed in action 5.1.14. However unless designed to specifically address an identified congestion issue, they are likely to exacerbate pollution problems as discussed above. Reducing carriageway from dual to single lane will significant exacerbate the congestion problems that are responsible for a large proportion of the air quality problem in that location and is discussed as action 5.1.6.	None required	Yes
Hagley Residents Association	If as we fear the traffic does increase air and noise pollution who will take responsibility as BDC & WCC have a duty of care to our health, safety and well being?	The AQAP meets the requirements of the Local Authority with regards to Local Air Quality Management. We all have a role to play in this regard and WRS will be facilitating a Steering Group to take toward the most effective measures identified in the AQAP which will include representatives from as many of the key stakeholders as possible.	None required	Yes
Hagley Residents Association	Do you believe that local air quality management AP will meet DEFRA'S and by association the Secretary of State 'expectations' of a 'safe' AQMAP and so will not need to activate their reserve powers and give direction for further actions?	Defra have provided positive consultation response	None required	No
Hagley Residents Association	What/who/when will WCC be involved in the Hagley AQMAP steering group?	WCC have provided consultation response to AQAP and will be involved from the outset of the steering group. As and when WRS can identify who with reference to specific Action Measures then we will invite them at the earliest point. Proposed timeline for Steering Group formation is in section 7 of the AQAP	None required	No

Hagley Residents Association	The plan only has 'soft' measures. What 'hard measures are proposed for Hagley? What influence do you have over the Cala Highways mitigation in terms of AQ mitigation?	All measures are identified for the purposes of the AQAP whether hard or soft, that have the potential for realistically improving air quality such that the AQMA may be revoked. Only these that can demonstrate such an improvement will be programmed. The measures are discussed further in Section 5 and 6 of the AQAP. The Cala Highways alterations were addressed through the planning regime. The assessments made at the time did not demonstrate that there would be any significant impact on AQ.	None required	No
Hagley Residents Association	Dealing with all 10 AQMAs in one action plan does have significant disadvantages. It is very difficult to extract data and proposed actions from the plan specific to the Hagley AQMA. We would prefer to see a separate AQ action plan for Hagley together with a separate steering group to give focus to the action plan.	The comments of the Residents Association are noted. The benefits in delivering progress of the potential measures of the AQAP are greater where resources are used more effectively and focused and for this reason. The ease of use in relation to one AQMA is out weighed by the greater good in potential progress to be made.	None required	No
Hagley Residents Association	The action plan states that "local authorities are unlikely to have direct control.. to effect real reductions in air pollution levels" (Section 1.4 page 7 2nd para). We strongly disagree with this statement. Local authorities have a number of direct controls via the planning system and local transport plans (e.g. traffic management improvements).	The comment made is correct. The action plan goes onto specify the need for partnership working to achieve AQ goals. Defra recognise District Authorities (in a two tier system such as Worcestershire has where the Highways department is a County Council function) have no direct control or responsibility over the main sources of pollution i.e. traffic congestion, road infrastructure, bus fleets, freight companies with the exception of council owned vehicles. It is acknowledged that the District Authority does have control over planning applications within National Frameworks but that generally only influences new developments and does not greatly influence the existing circumstances that have led to presence of AQMA.	None required	No
Hagley Residents Association	The Hagley AQMA has been described as "borderline". What is preventing the AQMA from being revoked?	Results indicated two exceedences in 5 years of study (2007-2011) at worst monitored location of relevant exposure (refer Section 3.1.5). When there is confidence that the results are consistently below the National Objective following a Detailed Assessment including dispersion modelling then the proposal to revoke the AQMA will be made to BDC.	None required	No

Hagley Residents Association	The AQ action plan states that the number of properties affected is 112 (plus 3 blocks of flats) and the number of people affected is less than 10 (Table 3.2 page 23). The stated number of people affected seems very small in relation to the number of properties. Please explain.	The AQMA includes 112 properties (plus 3 blocks of flats). However the further Assessment concluded that only 3 individual properties actually exceeded 40ug/m <sup>3</sup> (the objective for NO <sub>2</sub> ). The AQMA boundary was based on a more conservative figure of 36ug/m <sup>3</sup> to address uncertainties in the dispersion modelling.	None required	No
Hagley Residents Association	There appears to be some uncertainty over the exact boundary of the AQMA (Section 3.1 page 25). The action plan states that the boundary does not comply with DEFRA guidance. Please explain the reasons for this. Would review of the AQMA boundary result in a larger or smaller AQMA?	Defra guidance suggests using The rear Building line as the boundary for any AQMA. This would mean for properties where exceedences of The National Objective have been met. The property building would be included in an AQMA but rear gardens away from the road would not. Defra go on to clarify that the boundary must include buildings where there is an exceedence as a minimum but the actual boundary position can be greater subject to the discretion of The Local Authority. Whilst BDC AQMA boundaries do not follow the rear boundary line as the boundaries of their AQMA's they follow the line of likely exceedence. For Hagley this is based purely on a contour line of predicted NO <sub>2</sub> levels irrespective of property building outlines. So the Hagley AQMA boundary does not strictly follow the specific guidance but it is broadly compliant. Any amendments that are required will consider the practicalities of managing the AQMA and as a minimum include relevant areas of exceedence.	None at this time. AQAP Specific action KR2 in Section 6 addresses this issue.	Yes
Hagley Residents Association	Section 2.1.1 page 11 states that the European Commission will review the air quality ceilings in 2013. What are the likely outcomes for NO2 objective levels and what will the impact on the Hagley AQMA be? Is the annual mean NO2 threshold value of 40ug/m3 likely to change?	No update at this time. The UK like many other European Governments are seeking an increase in the threshold value as they deem their existing as too conservative. An increase in the threshold values could lead to revocation of some or many AQMA's dependent on magnitude of change.	None required	No

Hagley Residents Association	A steering group will be set up to oversee implementation of the air quality action plan. Is a single steering group proposed for all 10 Worcestershire AQMAs? This is likely to be unmanageable. We propose a single steering group for the Hagley air quality action plan.	Equally managing 10 steering groups would be even more unmanageable and repetition for many of the participants such as the County Council's Highways representatives - and as such we may lose some of their input due to resource constraints. There will be a single steering group but sub working groups could be formed targeted to address specific action types.	None required	Yes
Hagley Residents Association	How will WRS monitor and evaluate the effectiveness of the A456/A491 junction "improvements" carried out as part of the Cala Homes development in maintaining or reducing NO2 levels?	The junction improvements are not employed to tackle the existing AQMA however should there still be a requirement to monitor the current Hagley AQMA then this will short long term trends. Difficult to be more definitive as the development is not due for completion for another 9 years.	None required	No
Hagley Residents Association	What additional air quality mitigation measures, air quality monitoring and assessment should the developer be contributing funding under s106? Where funding from 'other' developments will WCC support its implementation i.e. real time monitoring and tree planting?	Assuming reference is being made to the Cala development then this is not relevant to the AQMA. In general however real time monitoring and tree planting does not offer significant air quality improvements - refer action 5.2.13	None required	No
Hagley Residents Association	The action plan sets out a large range of measures but most of these will require a feasibility study before the cost, impact and effectiveness of each is understood. When will these feasibility studies be carried out and by whom?	Generally these are issues to be discussed and ascertained through steering group work. However WRS are already undertaking some work into quantifying emission reductions of potential solutions where data and appropriate tools are available.	Future Steering Group Work	Yes



Hagley Residents Association	Many of the options may not be very effective e.g. car sharing, freight quality partnerships for the Hagley AQMA. The most effective measures are likely to include traffic management. For example the action plan refers to phasing of traffic light systems e.g. SCOOT, UTMC (Section 5.1.1 page 151). Have there been any discussions with Worcestershire Highways or neighbouring local authorities on this? How effective are these systems likely to be?	Discussions with Freight Quality Partnerships could be very effective for Hagley AQMA if leads to substantial reduction in HGVs passing through or an increase in use of vehicles which are compliant with higher emission standards. Similarly reducing the number of cars on road through encouragement of local firm's staff to participate in car sharing schemes and other travel plan initiatives could have beneficial effect on reducing congestion. Traffic management measures such as phasing of traffic lights systems will require feasibility studies by Highways. However Highways are in process of introducing a countywide Urban Traffic Management System into Worcestershire.	Future Steering Group Work	Yes
Hagley Residents Association	Traffic signals at the A456/A491 round about are proposed as part of the Cala Homes development. Traffic signals are included as a specific action in the action plan (Table 6.1). However, it is also stated that these are planned as part of the Hagley ADR development but not until 2022. Why not sooner? What work has been carried out to determine the effect on NO2 levels?	Details about specific planning consent is not relevant to this consultation.	None required	No
Hagley Residents Association	I note that there are 7 monitoring sites shown on the map of the Hagley AQM -this appears to be the highest number of all the AQMs relative to size....so doesn't this tell us that the Hagley AQM is recognised as a significant in terms of the potential of exceeding limits?	Not significant. The number of monitoring locations is in not linked to severity of problems in an area and relates more to topography, road layout, current position in the Review & Assessment process (i.e. if undergoing a Detailed or Further Assessment).	None required	No
Hagley Residents Association	How was this data collated in order to draw up the 'boundary' of the Hagley AQMA and why does the AQMA boundary mysteriously stop at the County Boundary on the Stourbridge Road? Note: the data collation must, by definition, have itself established two fundamental aspects, notably 1. the existence of an AQMA and 2. its boundary etc.	The actual boundary is based on predicted $36\mu\text{g}/\text{m}^3$ contour line resulting from air dispersion modelling undertaken by independent consultants for a Detailed Assessment of the area.	None required	No

Hagley Residents Association	Why was the Cala development given the go-ahead, and particularly the layout of the roundabout (when other less intrusive/polluting layout options could well be available when it is understood that this would fly in the face of general guidance and common sense in the context of mitigating AQMA's i.e. free flowing traffic is less harmful than stop/start traffic. What role was there between WCC Regs and WCC Highways?	This issue is not relevant to the Air Quality Action Plan and was addressed during the Planning process. WRS and The County Council highways Department liaise routinely on such matters.	None required	Yes
Hagley Residents Association	As a resident on the Stourbridge Road I clearly have a vested interest in seeing the AQMA rescinded. How will the 'powers that be' ensure this happens and when, or, as a minimum, that air pollution will not be allowed to increase further?	The AQAP is the proposed approach to facilitate progress on measures that will bring about improvements in air quality.	None required	No
Hagley Residents Association	3.1.1 On page 26 it is stated that "the length of the AQMA can be traversed comfortably in 5 to 10 minutes walk by an average person. Therefore the area does not meet the description of a location requiring assessment against any short term) i.e. 1 hour for NO2) air quality standards as outlined in TG09." If it is based on a 5-10 minute walk then this needs challenging as I would say from one end to the other it would take at least 20 minutes or more.	Irrespective if it takes 10 or 20 minutes the AQMA does not meet the description (within Defra Technical Guidance document TG09) of a location requiring assessment against the 1 hour objective for nitrogen dioxide.	None required	No
Hagley Residents Association	3.1.2 On page 30 it refers to some modelling and an assessment to confirm the requirement for an AQMA was completed in March 2012 In this section one paragraph states "The results demonstrate there are predicted exceedences of the annual mean objective within the AQMA and therefore the AQMA should be retained."	Yes, direct quote from the Further Assessment undertaken by independent consultants on behalf of Bromsgrove DC	None required	No

Hagley Residents Association	My impression of the Action plan is that there is no action plan-the report is very much one of reporting things as they are seen to be supported by lots of nice photos of cars and roads!	None required	None required	No
Hagley Residents Association	A "first indicator" that health is being affected in Hagley is not raised in the report – our own health survey clearly shows a high incidence of health issues in the Hagley AQMA. This is a major weakness in the AP.	Reporting local health issues is not a requirement of Local Air Quality Management.	None required	No
Hagley Residents Association	It is disappointing to say the least that the document did not collate information on air quality into a readable and coherent format. It did not spell out why an action plan has been written, what is hoped to be achieved and provide data and technical information in a readable format to back it up. What was the Defra guidance used to write the AP?	Please refer to Section 1 of the AQAP pages 7 - 11 for the reasons for AQAP and References for the multitude of source documents researched during the production of the plan. WRS have attempted to make the plan as accessible as possible but air quality is a highly complex and technical subject and the AQAP is unavoidably full of technical and scientific information in order to ensure complete transparency and to demonstrate compliance with relevant regulations and guidance to DEFRA and the Secretary of State.	None required	No
Hagley Residents Association	Why is there no wider monitoring of AQ in known rat runs such as the lights at Western rd., Summervale rd., Worcester Rd, Kidderminster Rd junction?	Monitoring is targeted where high pollutant concentrations are anticipated where traffic is slow moving, congestion and street canyons are present and there is relevant exposure and according to technical guidance from Defra. Other areas will be considered for monitoring if they meet this criteria. Monitoring at the traffic light junction of Worcester Rd/Kidderminster Rd/Worcester Lane/Summervale Rd/Western Rd junction has historically been undertaken - tube 11 (74 Worcester Lane, Hagley) between 2003 and 2011 was subsequently decommissioned due to results consistently below 36ug/m3. Tube KR2 is located in close proximity to the Worcester Rd/Kidderminster Rd/Worcester Lane junction and has been in place since 2010 and has return results no higher than 31ug/m3.	None required	No

Hagley Residents Association	What are your views on the high percentage of leukaemia, lymphomas and other cancers within Western Rd and South Rd area of Hagley which is right in the dip of the AQMA? Why aren't other AQ borne illnesses considered?	This is not a matter within the remit of the AQAP or WRS.	None required	No
Hagley Residents Association	Taken from the action plan: "It is generally recognised that although Local Authority has the responsibility of managing the air quality in their areas they are unlikely to have direct control or capability to effect real reductions in pollution levels." - This sentence doesn't encourage people to be enthusiastic about air quality or feel as though their actions will really make a difference. Please clarify.	The Local Authority can not effect improvements in isolation, it will require partnership working with other agencies such as Highways at County Council, local businesses, bus operators, local schools etc.	None required	Yes
Hagley Residents Association	We need a plan which will inspire not just the local authority into action but also the public into getting more actively involved which they will only do if they feel they can actively make a difference. - We need a different attitude and a different approach.	The Air Quality Action Plan provides a frame work for the Local Authority to target action and energy of all involved through the coordination of a Steering Group. The AQAP should not be considered in isolation.	None required	No
Hagley Residents Association	Surprisingly there is minimal data available to local authorities on the success of the variety of solutions adopted in previous action plans across the UK or identified in guidance documents. - We need a more proactive approach. - I think in a village such as Hagley where there has been a lot of in-fill housing it has led to lots of numerous traffic flow problems for residents. If these could be solved by the LA then it would help general traffic flow and make things easier for all concerned.	Agree that resolving traffic flow issues will significantly improve air quality problems in the area. As previously discussed traffic flow issues can only be addressed by partnership working, note that a considerable number of the actions under consideration in the AQAP relate to improving traffic flow. Only measures targeting improvements to traffic flows that can show they lead to revocation of the AQMA's will be pursued by any Steering Group programing the AQMA	None required	Yes

Hagley Residents Association	No information about National air quality initiatives and how Bromsgrove are tying in with this which would have been useful. Also, some of the information I found to be inaccurate e.g. Walking time frames are reduced in Worc Regs documentation. Walking along the main road to school for example takes longer if you are walking with small children – also because of the dangers involved walking next to a busy main road and the stopping times required to cross.	The important national air quality initiatives are included in the Action Plan. The walking timeframes where relevant are consistent with Defra Guidance.	None required	Yes
Hagley Residents Association	For NO2, the 1-hour mean AQO of 200 µg/m3 (with no more than 18 exceedences per year) is based on acute health effects, while the annual mean AQO of 40 µg/m3 is based on chronic health effects.' (Lowe, 2010). If residents are doing short trips along the main road several times a day could they still be affected? What is the link up with the health service on this – are there any local studies being done?	WRS contacted LAQM helpdesk at Defra with this query and response is as follows: 'Depending on the sensitivity of the individual, they could be affected by short-term exposure. The use of an hour is just used to define and measure the objective. The objectives are based on WHO guidelines...' Automatic monitoring undertaken within Hagley AQMA indicates nitrogen dioxide levels are well below the 1 hour average mean objective (maximum recorded 148µg/m <sup>3</sup> in worst recorded year for Air Quality in a number of years equalling only 75% of one of possible 18 exceedences). Local health studies are outside the remit of the AQAP.	None required	No
Hagley Residents Association	Is this report really up to date? – p 15 refers to an old plan 2.3.1. However at this time it is considered appropriate to focus WRS resources on production of the Countywide Action Plan. Amendment to these documents will occur at a later date. – this is confusing and unhelpful.	This is in reference to the Herefordshire and Worcestershire Pollution Group 2008 produced Air Quality Strategy, Planning Protocol and Supporting Information. These are supplementary planning documents adopted by all the Worcestershire district councils in 2009. Since that time National Planning Policy and Defra Air Quality Planning guidance have been changed and WRS has been created and therefore updates to these documents are required to reflect those changes in due course. However WRS considers the priority focus at this time is the development and progression of the Action Plan.	WRS are working on an updated Supplementary Planning Document potentially in collaboration with the West Mercia Pollution Group.	Yes

Hagley Residents Association	Transport – again it repeats details of an old plan. What is the new transport plan?	The current Local Transport Plan is LTP3 as referred to in Section 2.3.2 of the AQAP. This section has been expanded upon since the draft AQAP following consultation comments from County Council Highways.	None required	Yes
Hagley Residents Association	2.3.2. The full plan and associated documents can be downloaded from the County Council's website at: <a href="http://www.worcestershire.gov.uk/cms/local-transport-plan.aspx">http://www.worcestershire.gov.uk/cms/local-transport-plan.aspx</a> Why wasn't the necessary data pulled out of this report and put into the plan. It is very confusing and unnecessary to be given a link which takes you away from the action plan.	The full LTP3 document and associated policy documents is several hundred pages combined and inclusion within the AQAP would create an undesirably bulky and far more complex report than is deemed necessary. Actions in LTP3 relevant to the AQMAs have been included in appropriate sections of the AQAP and policies relevant to air quality have been included as an appendix in the final version of the AQAP. For Hagley the relevant sections are included in section 3.1.7 and within Section 6 if specific to solutions for the AQMA.	None required	Yes
Hagley Residents Association	Increased levels of cycling helps to counter the adverse effects of traffic growth, such as congestion and air and noise pollution. This can act to enhance overall quality of place, and therefore quality of life in Worcestershire. Cyclists can improve a person's wellbeing and the cycling network includes pleasant traffic-free routes through the county's green spaces.	Agreed	None required	Yes
Hagley Residents Association	I couldn't find any specific greener transport plans for Hagley. Just bland data about cycling being good for the county. Are there any stats on the dangers of cycling in traffic perhaps to balance it out? I believe cycling along main roads is not good for people's health and is dangerous. I would be interested in finding out information about this. Also cycling in dormitory villages such as Hagley is for pleasure and not effective to commute to work.	The first and second part of this statement are connected and emphasises why no specific solutions regarding cycling have been identified within the AQAP for Hagley. Generally the pollutant concentrations in Hagley are as a result of volume of trans boundary traffic. The dangers of cycling in traffic and the health implications of doing so is not remit of Local Air Quality Management or focus of the Action Plan.	None required	No

<p>Hagley Residents Association</p>	<p>Lots of use of jargon like modal hierarchies – which are then referred to in a later document. This proves this document is very badly written as to get to the bottom of it I need to open about ten windows on my computer. This makes it very hard to take in any coherent information which is actually useful or informative to me as a member of a residents group or as an individual e.g.: Many people never learn to ride a bike and others stop riding once they are adults. A lack of confidence and feelings of vulnerability are common reasons for not cycling. Training can give new and less confident cyclists the knowledge and confidence to take up cycling or use their bike for more trips and contributes to reducing road accidents involving cyclists. Cycling England, the national body promoting cycling, founded Bike ability, a three-level national programme for cycle training based on the National Standard for Cycle Training, the UK standard approved by several organisations including ROSPA. Further details are given in the LTP3 Transport Safety &amp; Smarter Choices Policies. This is hardly going to help the majority of people think to take up cycling! People feel vulnerable on bikes because they are vulnerable. Roads are so congested, if I cycled I'd find it unpleasant to breathe in all the pollution and would be very worried about safety. Its also practical things like if you cycle to work you are going to have to wear different clothes and shower when you get there. Or that you can't take young children on them with all their school stuff. It has to actually be a pleasant and safe experience to make it worth people's while.</p>	<p>The consultee is not referring to Air Quality Action Plan document but quoting direct from and commenting on Worcestershire County Council's Local Transport Plan 3 - not relevant to this consultation.</p>	<p>None required</p>	<p>No</p>
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Hagley Residents Association	<p>There are lots of woolly statements such as it must follow six themes. Communities that are safe and feel safe; A better environment for today and tomorrow; Economic success that is shared by all; Improving health and well being; Meeting the needs of children and young people; and Stronger Communities (including housing, culture, poverty and volunteering). It would do better to relate back to the question in point – air quality. Where transport-related air quality management measures are considered, these are normally developed to reduce motorised traffic levels (and emissions) in designated Air Quality Management Areas. These measures often involve enhancements to infrastructure to support the use of more sustainable, healthy modes such as walking and cycling. Where are the specific examples? Again it's all too fluffy. What enhancements in infrastructure. Have they helped in the past? What evidence do they have to prove that it will help in the future?</p>	<p>The consultee is not referring to Air Quality Action Plan document but quoting direct from and commenting on Worcestershire County Council's Local Transport Plan 3 - not relevant to this consultation.</p>	<p>None required</p>	<p>No</p>
Hagley Residents Association	<p>Improvements to A491 Stourbridge Rd/A456 Kidderminster Rd/Hagley Hill junction essential to reducing pollutant levels in AQMA. Traffic light phasing should be considered as part of wider study. Impact depends on final junction solution. Is a study going to be done? Why has one not been done before now? Have any local health studies been done to identify who in the county is being most affected? How is it being measured? Is it been done proactively or are they relying on the public to report the problem?</p>	<p>Within the AQAP WRS have proposed a feasibility study to identify potential improvements to the current traffic light system and junction is undertaken by WCC. Whether any action proposed within the AQAP can or will be undertaken will be considered by the Steering Group. At this time WRS have no information detailing previous studies or improvements undertaken by County Council previously health studies are not within the remit of WRS or the AQAP. AQAP Action KR5 refers to Junction study</p>	<p>None required</p>	<p>Yes</p>



Hagley Residents Association	What can they do to reduce school traffic? School bus system or car sharing schemes perhaps	Encourage all schools in Worcestershire to implement School Travel Plans with assistance from County Council. Outlined in AQAP Action 5.3.1	None required	Yes
Hagley Residents Association	Planned as part of Hagley ADR development but not due completion until 2022. Will reduce traffic congestion entering Kidderminster Rd from south, but not impact congestion on Hagley Hill. Don't understand how it can reduce congestion – need to question this point and not accept it.	Believe consultee is referring to the proposed changes to introduce traffic lights on the gyratory as part of the Cala Homes development: quite correct in assuming that this would only affect Kidderminster Road and not Hagley Hill. This is anticipated to reduce congestion in Kidderminster Road south of the A456 Hagley Hill/A491 junction. Other solutions proposed such as KR5 junction study will be required to reduce congestion travelling southwards along Hagley Hill.	None required	Yes
Hagley Residents Association	How come in America they are actually doing the opposite? See links below: <a href="http://www.howstuffworks.com/car-driving-safety/safety-regulatory-devices/self-organizing-traffic-lights-could-help-end-road-congestion.htm">http://www.howstuffworks.com/car-driving-safety/safety-regulatory-devices/self-organizing-traffic-lights-could-help-end-road-congestion.htm</a> and <a href="http://www.wsdot.wa.gov/Projects/SR539/I5_Access/Tenmile_Border/Roundabouts.htm">http://www.wsdot.wa.gov/Projects/SR539/I5_Access/Tenmile_Border/Roundabouts.htm</a>	WRS are unable to comment on approach in America. The AQAP has been produced to comply with the UK government requirements and address regional and local air quality issues.	None required	No

<p>Hagley Resident</p>	<p>It was with interest that I read your 2012 Air Quality Updating and Screening Assessment: Bromsgrove District Council, which had taken you some 6 months to compile after the last round of monitoring and yet a further 9 and a half months to disseminate for consultation. It is somewhat disappointing that anything to do with the stated aim of improving air quality takes so long.... Since I live within 4 doors of the highest recorded level of Nitrogen Dioxide within the County, I would hope that my concerns would be taken into account... My biggest concern is the clear lack of any action to address the problem which you have identified... In which case why bother going to the unnecessary expense of measuring something if there is no will to do anything about it? ...Other than high level, un-quantified aims there are no concrete measures to improve air quality... our Council... has failed us by its omission to take any positive steps to improve air quality. It has even failed us by taking the negative step of allowing substantial development within the AQMA. This will only increase traffic volumes and any study which claims otherwise is clearly fatuous. Whilst there is a suggestion that a traffic light controlled roundabout will be the answer to the unacceptable level of pollution, that is poppycock!...</p>	<p>The consultee is specifically referring to a report that is required by Defra as part of the LAQM 3 year reporting cycle and not the Air Quality Action Plan document. The Updated Screening Assessment does not incorporate actions to improve air quality and is not relevant to this consultation. NB Regarding consultees comments concerning levels in Hagley AQMA: Table 3.2 in the AQAP summarises pollutant concentrations and number of exceedences recorded in all AQMAs. The highest recorded levels of NO2 in Hagley are in fact the second lowest of the County AQMAs and the Hagley AQMA has recorded only two likely breaches of the National Objective of NO2 within the 5 years to end of 2011. For this reason Kidderminster Rd, Hagley is considered a 'borderline' AQMA.</p>	<p>None required</p>	<p>No</p>
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## Comments from Welch Gate, Bewdley Consultees

Consultee	Comment Received	WRS response	Follow up Action if Required	Included in Action Plan? Y / N
Welch Gate AQMA Resident	From the corner of 93 Welch Gate to 81 Welch Gate to widen the pavement so to allow one set of traffic through and this is the same on the Welch Gate diner up to the corner.	Not likely a viable option due to knock on effects further along Welch Gate and in town from queuing traffic	None required	No
Welch Gate AQMA Resident	Traffic calming should be implemented like the one in High Street, Bewdley (priority) and down by the high school in Bewdley.	A number of road improvements to Welch Gate have been trialled by WCC Highways following assessment by independent consultants as part of LTP3 BE1 - Bewdley (Welch Gate) AQMA Remediation. Unfortunately none of the trials have been successful. See section 3.9.7	None required	Yes
Welch Gate AQMA Resident	The Pavement raised as this will try and stop motorists mounting the pavement.	Street improvements have been completed recently.	None required	Yes
Welch Gate AQMA Resident	Proposal No. 2 - the other option will be traffic lights these will be placed just the start of Welch Gate going up Country. The other set will be on the corner of the Chinese Golden and the other set will be at the top end of Welch Gate opposite the wood colliers public house. and then junction boxes would be put in at entrances of Park Lane and high Street. Hand written map enclosed (paper copy)	A number of road improvements to Welch Gate have been trialled by WCC Highways following assessment by independent consultants as part of LTP3 BE1 - Bewdley (Welch Gate) AQMA Remediation. Unfortunately none of the trials have been successful. See section 3.9.7	None required	Yes

## Comments from Port Street, Wychavon Consultees

Consultee	Comment Received	WRS response	Follow up Action if Required	Included in Action Plan? Y / N
Wychavon Resident	The recent air quality plan contains several incorrect statements and an omission close to my home. Please can you advise what action has been taken or is envisaged due to the increased traffic and congestion in Evesham (particularly Port Street) due to the closure of the Abbey Bridge? Wychavon's statement 3.6 sees no changed traffic flows.....	The redevelopment of Abbey Bridge may potentially have an effect on the AQMA through increased congestion due to the closure of the bridge and temporary traffic arrangements. However this is for a short term 10 week period and is unlikely to be significantly discernable within the Annual Averaged measured pollutant concentrations in Port Street. The remit of the AQAP is to provide solutions to mitigate existing long term air quality issues and the Port Street AQMA exists currently with or without the Abbey Bridge development. It is not appropriate nor a requirement of action planning to include solutions to mitigate short term impacts. Any potential impacts have been considered as part of the planning consultation process.	None required	No

## Comments from Worcestershire County Council Consultees

Comment Received	WRS Response	Follow up Action if Required	Included in Action Plan? Y / N
GENERAL COMMENT – There is no mention of the numerous relevant LTP3 policy documents, which can be viewed at <a href="http://www.worcestershire.gov.uk/LTP3">www.worcestershire.gov.uk/LTP3</a> . The LTP3 Transport and Air Quality Policy is particularly relevant to this plan and should be extensively referred to throughout this document.	This has been addressed in update to the draft AQAP and an appendix including all LTP3 policies relevant to air quality has been included.	Actioned	Yes

GENERAL COMMENT – In the LTP3 Main Document, there is also mention of the five major schemes. These schemes, which include the Worcester Transport Strategy (Phase 1), Evesham Abbey Bridge and Viaduct, Kidderminster Transport Strategy (for which the first phase; the Hoobrook Link Road, has recently secured funding to enable it to proceed), Worcestershire Parkway and Redditch Transport Strategy. These can be found on pages 45 and 46, and should be referenced in this document as all are likely to have a major impact on Air Quality in their respective areas.	Reference to all these major schemes with the exception of Redditch Transport Strategy (as there are no AQMAs currently in Redditch) and their relevance to air quality is included in Section 2 in update to the draft AQAP. However it is not possible to specify impacts or benefits or actions or mitigation in connection with any development until the detail of the development and an assessment of impacts is presented to the Local Authority. Therefore it is not appropriate to include within the AQAP. WRS will advise Local Planning Authorities and developers on specific impact and mitigation required from individual and cumulative developments as required by the LPA at the appropriate stage of development.	Actioned	Yes
Furthermore, reference can also perhaps be made to the Worcestershire 'game-changer' sites: Malvern Science Park, Worcester Technology park, British Sugar Site and the Redditch Eastern Gateway	With the exception of the British Sugar Site in Kidderminster it is unclear at this time if any of these sites will impact on air quality. Malvern and Redditch have no AQMAs currently and little information could be established on the Worcester Technology Park. Specifics of individual developments can not be included within the AQAP as detailed above	None required	No
3.5 Dolday/Bridge Street AQMA - Worcester City Council, Figure 3-12 Plan of AQMA: - This map is out of date – could a more recent one be used which shows new developments in the area?	All the plans within the AQAP have been copied from previous reports. Updated plans will be incorporated into future versions of the AQAP following implementation of a new WRS IT system including GIS mapping in late 2013	Future update to AQAP	No
3.5.7 Actions identified from Local Transport Programme 3 (LTP3): Table 3-18 LTP3 actions impacting Dolday/Bridge Street AQMA. W1, W2, W9, W11 & W14 - Action update provided.	Accepted	Actioned	Yes
3.5.8 Summary of key issues identified from review for consideration within actions Issue DD1 - Spelling/wording amendment	Accepted	Actioned	Yes
3.5.8 Summary of key issues identified from review for consideration within actions Issue DD2, Suggest this may not be advisable – the car park and poor quality commercial buildings create trip attractors which exacerbate AQMA issues by impeding the smooth flow of traffic and attracting more vehicles into the area. Removal of the car parks in this area and sensitive re-use (or even demolition) of these poor quality commercial buildings could deliver significant benefits to air quality.	The area of each AQMA is dependent on the location of relevant exposure i.e. habitable space in areas of high pollutant concentrations identified from dispersion modelling and as such the eastern boundary should be extended to include residential dwellings on the eastern side of Bridge Street and at same time the western boundary can be adjusted to exclude the non habitable car parking space.	None required	No
3.6.2 Summary of any Further Assessment report - spelling amendment last bullet point	Accepted	Actioned	Yes

Figure 3-18 shows location of 16 worst case receptors, monitoring locations and AQMA boundary. Lowesmoor is misspelled in this graphic.	All the plans within the AQAP have been copied from previous reports. Updated plans will be incorporated into future versions of the AQAP following implementation of a new WRS IT system including GIS mapping in late 2013	Future update to AQAP	No
3.6.7 Actions identified from Local Transport Programme 3 (LTP3): Table 3-21 LTP3 actions impacting Lowesmoor/Rainbow Hill AQMA - Actions update provided	Accepted	Actioned	Yes
Issue LRH7, This traffic is caused by contravention of Traffic Regulation Orders at Trinity Gate junction which limit access into Lowesmoor during the afternoon peak westbound.	Comments added to AQAP text.	Actioned	Yes
3.9.7 Actions identified from Local Transport Programme 3 (LTP3) Table 3-35 LTP3 actions impacting Welch Gate AQMA - Actions update provided.	Accepted	Actioned	Yes
5.1.1 Action: Alteration to phasing of traffic lights system. Hagley - Comments to be provided. Dolday - Comments to be provided. Lowesmoor - Action update provided. Welch Gate - Was this delivered? If not, why?	Lowesmoor comments accepted. Awaiting update from WCC regarding other comments	Actioned	Yes
5.1.2 Action: Change carriageway from two way to one way only - Lowesmoor, feasibility NO. Not applicable – Lowesmoor is an essential bus route and so two-way traffic flow must be maintained for buses due to a lack of suitable alternative routes. There is potential to reduce general traffic flows by making this an access-only route, however, a one-way route would increase traffic speeds, making the street less attractive for pedestrians and cyclists and causing deterioration in the public realm.	Comments added to AQAP text.	Actioned	Yes
5.1.2 Action: Change carriageway from two ways to one way only - Port Street, Feasibility check - NO. but would not be suitable in this area because a one-way scheme in this area would lead to severe reductions in accessibility to services and facilities for local residents.	Comments added to AQAP text.	Actioned	Yes
5.1.2 Action: Change carriageway from two ways to one way only - Welch Gate - These trials had no positive effects.	Comments added to AQAP text.	Actioned	Yes

5.1.4 Action: Variable Message Signing (VMS) Lowesmoor - Significant parking availability immediately adjacent to AQMA. There is potential to reduce or remove on-street parking in this area and make better use of VMS and RTIS to encourage increased bus use and more efficient use of local car parking infrastructure as part of a city-wide approach. VMS have now been installed on a number of major approaches into the city as part of the Worcester Transport Strategy (Phase 1). Welch Gate.	Comments added to AQAP text.	Actioned	Yes
5.1.5 Action: Loading and unloading restrictions during peak traffic periods. Lowesmoor - The maintenance and enhancement scheme will significantly improve traffic regulation in Lowesmoor.	Comments added to AQAP text.	Actioned	Yes
5.1.6 Action: Priority Bus and High Occupancy Vehicle (HOV) lanes and corridors. Hagley, Lickey End, Redditch Road, Worcester Road, Dolday and Lowesmoor - Action update provided.	Comments added to AQAP text.	Actioned	Yes
5.1.7 Action: Improvement of signage for traffic to avoid AQMA. Dolday - Action update provided.	Accepted	Actioned	Yes
5.1.8 Action: Introduction of traffic signals at roundabouts. Lowesmoor - Lowesmoor Terrace/Place mini roundabout will be signalised as part of Worcester Transport Strategy (Phase 1) to improve and regulate traffic flow.	Accepted	Actioned	Yes
5.1.9 Action: Introduce or improve feeder/merger lanes to improve flow. Lowesmoor - Action update provided.	Comments added to AQAP text.	Actioned	Yes
5.1.10 Action: Pedestrianisation of streets within area. Lowesmoor - Feasibility check - Unlikely. Impact Score - 3. Rationale - wording amendment and updated. Port Street - Feasibility Check - Unlikely. Rationale - wording amendment.	Accepted	Actioned	Yes
5.1.11 Action: Remove build-out in streets to allow cars to pass simultaneously. Lowesmoor - Action update provided.	Accepted	Actioned	Yes
5.1.12 Action: Removal of parking bays in problem streets. - Welch Gate.	Accepted	Actioned	Yes
5.1.13 Action: Alterations to Parking Provision and Pricing. Lowesmoor - Close to town centre and several car parks within 400 metres of the street.	Accepted	Actioned	Yes
5.2.1 Action: Bus Quality Partnerships (BQP). Dolday, Lowesmoor - Action update provided.	Comments added to AQAP text.	Actioned	Yes

5.2.3 Action: Park & Ride Schemes -incorrect numbering . 5.2.3 Action: Railway enhancements. - Incorrect numbering. 5.3.2 Action:Railway enhancements. 5.2.3 Action: Greening Council and Business fleets - incorrect numbering. 5.2.4 Action: Low Emission Zones (LEZ) - Incorrect numbering. 5.2.5 Action: Introduce Fixed Penalty Notices for Stationary Idling - Incorrect numbering. 5.2.6 Action: Introducing Differential Parking Rates - incorrect numbering. 5.2.7 Action: Installing Electric Vehicle Charging Points - incorrect numbering. 5.2.8 Action: Roadside Emission Testing - incorrect numbering. 5.2.9 Action: Signage identifying AQMA - incorrect numbering. 5.2.10 Action: Tree Planting - incorrect numbering. 5.4 Promotional Alternatives. Should be 5.3, rewording of Promotional Alternatives. 5.4.1 Action: Improve cycling and walking routes in local areas. - Incorrect numbering. 5.4.2 Action: Install secure cycle parking shelters - incorrect numbering. 5.4.3 Action: Promote and support walking and cycling initiatives in Worcestershire - incorrect numbering. 5.4.4 Action: Smarter Choices – 'Choose how you move - incorrect numbering.	Restructure of Section 5 action types accepted	Actioned	Yes
Specific Actions Table 6-1. KR3 - Proposed action amended and inputted.	Comments added to AQAP text.	Actioned	Yes
Specific Actions Table 6-1. KR4 - Proposed action inputted	Comments added to AQAP text.	Actioned	Yes
Specific Actions Table 6-1. KR5 Proposed action and cons amended and inputted. 'A proposed Hoobrook Link Road is planned which will act to reduce traffic queuing on the Kidderminster Ring Road'	This comment has not been added to the AQAP. It is acknowledged that the proposed Link Road will relieve queuing on the ring road between the A49 Worcester Road and the Stourport Road however this is 1.5km south of the Kidderminster AQMA. This action is unlikely to have any discernable impact on reducing emissions in Horsefair or Coventry Street as the pollutant concentrations there are not linked to queuing on any part of the ring road.	None required	No
Specific Actions Table 6-1. LE4 - cons deleted and amended.	Accepted	Actioned	Yes
Specific Actions Table 6-1. LE5 - Lickey End added.	Accepted	Actioned	Yes
Specific Actions Table 6-1. LE9 - Action update provided.	Accepted	Actioned	Yes
Specific Actions Table 6-1. LE10 & LE11 cons action update provided.	Accepted	Actioned	Yes
Specific Actions Table 6-1. RR2 cons action updated.	Comments added to AQAP text.	Actioned	Yes
Specific Actions Table 6-1. WR9 cons action updated.	Accepted	Actioned	Yes



Specific Actions Table 6-1. WR11, WR14 Proposed action update provided.	Accepted	Actioned	Yes
Specific Actions Table 6-1. DD1 - cons action update provided.	Accepted	Actioned	Yes
Specific Actions Table 6-1. DD4, proposed action and cons actions update provided.	Comments added to AQAP text.	Actioned	Yes
Specific Actions Table 6-1. DD5 proposed actions, update provided.	Accepted	Actioned	Yes
Specific Actions Table 6-1. DD7, cons actions update provided.	Accepted	Actioned	Yes
Specific Actions Table 6-1. DD8 proposed actions and cons, actions update provided.	Accepted	Actioned	Yes
Specific Actions Table 6-1. DD9, word amendment.	Amendment not necessary.	None required	No
Specific Actions Table 6-1. LRH1, word amendment.	Accepted	Actioned	Yes
Specific Actions Table 6-1. LRH5 LRH6 LRH7 LRH8 - Action update provided.	Comments added to AQAP text.	Actioned	Yes
Praise for a high quality report with much consideration. Hagley Air Quality Management Area – there is no consideration of the impact of the housing development for which Bromsgrove District Council gave planning approval earlier this year on the Air Quality Management Area. In particular my view is that there is going to be a significant impact on the Air Quality Management Area and that it will be some years before the full impact is truly known.	The remit of any AQAP is to provide solutions to mitigate existing air quality issues. The Hagley AQMA exists currently with or without future development because of previously recorded pollutant concentrations. It is not required to provide consideration of impacts on air quality from future developments within the AQAP. Other reports on air quality required annually by Defra do include a consideration for new developments. Air Quality is a material consideration within the planning regime and there is provision within National and Local Planning Policy to address individual and cumulative developments that potentially could impact air quality. A specific assessment including dispersion modelling for each individual and cumulative developments is required to determine impact. Such an assessment was undertaken for the Cala Homes development and demonstrated a negligible impact on the Hagley AQMA and therefore no mitigation is required. However a planned Highways solution incorporating traffic signals at the roundabout is anticipated to provide benefit to the Hagley AQMA through reduced congestion and subsequent reduction in pollutant concentrations in Kidderminster Road.	None required	No
I note that you have observed many buses passing through the Hagley Air Quality Management Area (issue KR4) and these will be have been heading to the two major schools in Hagley – the Roman Catholic High School and Haybridge High School.	Noted	Info to be added to future AQAP update	TBC

Worcester Road, Bromsgrove Air Quality Management Area – Issue WR11: This needs rewording to avoid conflict with bus operators Clearway and MRD particularly the use of the word "old" when this description is not used for any other road user group in your report. Clearway (route99) and MRD (route93)	Noted.	To be amended in future AQAP update	TBC
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## Appendix 2

### **Consultation Responses on Air Quality Action Plan Progress Report (Consultation Ended 16<sup>th</sup> September 2015)**

#### **Worcestershire County Council**

1. *The initiation of a major bid to the Low Emission Bus Scheme for the Worcester City area with the aim of transforming the existing bus fleet to ultra low emission vehicles.*

*Unfortunately we were unable to move forward with this in 2015 but will endeavour to work more closely with potential commercial bus operators in future.*

2. *- The transport modelling and imminent trial of junction re-configuration at Port Street, Evesham with the aim of reducing congestion and the number of vehicles held inside the AQMA.*

*We certainly are committed to delivering this but the finer details need to be discussed with the local Member and Portfolio Holder so can we reword slightly to indicate that we are working up a solution to this subject to the final scheme sign off.*

*What you could say is that the County Council are actively developing transport schemes (Infrastructure Delivery Plans) to mitigate the potential impact of additional trips generated by residential and commercial development identified through the Local Plans.*

**WRS Action** – *Wording amended to reflect the above.*

## **Wyre Forest District Council**

### **Horsefair:**

*You seem to be treating the Chuchfields Masterplan as a prescriptive, detailed document, it isn't; it is a high level advisory piece, the detail will flow from the planning application(s) that are submitted for redevelopment. You also seem to know more than I do about WCC plans for the re-engineering of the ringroad and I've separately emailed WCC on that matter as again I think you are probably attributing more certainty to that than is actually the case.*

*5.1.5 WFDC isn't lead authority for this*

*5.3.4 also we can't be lead on this as we have no influence over businesses nor do WCC. Progress to date and over last 12 months is not relevant to WF but relates to other parts of Worcs – a copy & paste faux pas?*

*5.1.1 as above ref removal of roundabouts in progress, I doubt WCC will want you to refer to it like that.*

*5.1.8 as 5.1.1*

*5.2.5 what conversation have you had with our Depot team about this? Again progress relates to Redditch and not WF*

*5.3.2 progress refers again to Redditch not WF*

*5.4.5 as 5.3.2 but this time Worcs City*

*5.5.1 news to me and I suspect my planning policy team; how do you expect that the SPD will be adopted?*

### **Welch Gate**

*You'll need to qualify the comment about a single large car park facility, you can't just make a bold statement like it stands at the moment.*

*Same comments apply throughout about checking cut and paste from elsewhere, I'm not going to pinpoint every one for you, it needs a thorough read through. Many other comments also relate to WG as they do Horsefair so please consider them made as above where they appear again under WG*

*WG4/5.1.1/5.1.5 – what county wide action plan has the district adopted?*

**WRS Action** – *Wording amended for clarity where applicable. Some actions are more specific to other areas but have wider reaching impact across the county*

### **Bromsgrove District Council**

*There are clearly issues linked to the Local Plan, particularly in respect of highways*

*...interesting to read about the bromsgrove "eastern" by-pass!*

*I haven't been able to go through every bit in fine detail, but there's a lot in here which I'm assuming is being progressed by people other than ourselves, who are better placed to comment i.e. WCC highways, or environmental health.*

*One of the schemes which they say has been implemented or initiated is*

*- A joint bid between Birmingham City Council and Bromsgrove & Redditch Borough Councils for the installation of a compressed natural gas filling facility and pipeline infrastructure in Worcestershire has been made.*

*As far as im aware (see email attached) this has been veto'd by WCC so probably shouldn't be in the report*

**WRS Action** – *The report includes progress on identified actions up to 30<sup>th</sup> April 2015. At this time the OLEG funding bid (natural gas pipeline) was still being pursued and therefore still included within this report.*

# Appendix 3

## Prioritisation Matrix

The following matrix was used by WRS to prioritise actions for each AQMA.

Degree		Financial Cost		Socio-Political Factor		Ease		Timescale		Confidence	
Likely degree of contribution towards reducing NOx		Cost in financial terms of implementation of the measure		Wider socio and political support for such a measure.		Feasibility of implementing the measure outside of cost, social-political factors		Time required to implement the measure		Confidence in the scoring	
10	High	4	up to £5k	3	likely to be social and political support	4	No obstacles	4	1 -2 years (2014-15)	H	High Confidence
8	Medium - High	3	£5k to £25k	2	No opinion likely	3	Feasible	3	3 - 5 years (2016-18)	M	Fairly confident
6	Medium	2	£25k to £100k	1	likely to be social and political opposition	2	Unlikely	2	6 - 10 years (2019-23)	L	Low confidence
4	Low - Medium	1	Greater than £100k			1	Very unlikely	1	>10 years (2023+)		
2	Low										
0	Negligible Impact										
-1	Detrimental Impact										

# Appendix 4

## **County Council AQMA Technical Discussion Papers and WRS Responses**

The following AQMA specific Technical Discussion Papers were produced by Worcestershire County Council in November 2014. The papers aimed to set the AQMAs in the context of transport-specific issues and constraints, planned development growth, local demographics and economic profiling as well as current proposed transport schemes.

Following development of these papers WRS produced a series of comments and Sub-Group members were consulted for their comments. Copies of these responses are also included below.

# BROMSGROVE URBAN AQMA<sub>s</sub> AIR QUALITY MANAGEMENT AREAS TRANSPORT ISSUES DISCUSSION PAPER

## Background

For background details of the designation and proposals for the various Bromsgrove AQMA<sub>s</sub>, please refer to extensive data and commentary provided on the Worcestershire Regulatory Services website:

- [www.worcsregservices.gov.uk/pollution/air-quality.aspx](http://www.worcsregservices.gov.uk/pollution/air-quality.aspx)

## Route Function and Local Economy

Bromsgrove has two AQMA<sub>s</sub>, focussed on the key transport corridors. Existing AQMA<sub>s</sub> include:

- *Redditch Road, Bromsgrove (Bromsgrove Eastern Bypass)*
- *Worcester Road, Bromsgrove*

Recent monitoring suggests that exceedances of pollutants are currently not being observed at the Redditch Road AQMA, which may result in revocation.

## Development Growth

Through the emerging Bromsgrove District Plan, significant development growth is proposed for Bromsgrove, particularly around the western fringes of the town between the existing urban area and the M5. Bromsgrove already has a large number of residents which commute into the West Midlands Conurbation for employment. Further details of this planned development growth can be viewed at:

[www.bromsgrove.gov.uk/cms/environment-and-planning/planning/strategic-planning/bromsgrove-district-plan.aspx](http://www.bromsgrove.gov.uk/cms/environment-and-planning/planning/strategic-planning/bromsgrove-district-plan.aspx)

## Approach

Currently, all designated Air Quality Management Areas (AQMA<sub>s</sub>) in Worcestershire are the result of vehicular emissions. In strategic terms, to bring air pollutant levels below identified threshold levels in AQMA<sub>s</sub> caused by vehicular emissions, mitigation options are either to:

1. Improve dispersion of pollutants, for example through landscaping, junction redesign and/or building demolition, or;
2. Reduction or reallocation of traffic away from the polluted area.

It is suggested that a mix of options may be appropriate for Bromsgrove's AQMA<sub>s</sub>.

## Objectives

The following objectives are proposed:

1. To remove all strategic traffic out of Bromsgrove Town Centre through improvements, by providing and improving suitable alternative strategic routes such as the M5, the M42 and the A38;
2. To promote modal shift wherever possible to low-carbon modes of transport within the urban area, to dramatically reduce the amount of local journeys (within city) made by motorised modes;
3. To optimise accessibility to trip attractors in Bromsgrove Town Centre by non-car modes.

Assessment of Options	
<p>In recent times, major investment in Bromsgrove's transport infrastructure and services has been brought forward, including the improvement of Bromsgrove High Street and major investment in Bromsgrove Railway Station to provide a new terminus for the Cross City Line. Major investment by the Highways Agency in Managed Motorways on the M5 and the M42 will significantly increase the capacity of these major arterial routes, and improve journey time reliability, keeping strategic traffic on the strategic highway network.</p>	
<p><b>Investment in capacity enhancement of the A38 (Bromsgrove Eastern Bypass) Corridor</b></p>	<p>As part of the Bromsgrove District Plan and Worcestershire Strategic Economic Plan, it has been identified that major investment will be required in the A38 Bromsgrove Eastern Bypass to support development growth and improve the efficiency of this corridor. Investment in this corridor must take full account of the current AQMA designation on the Redditch Road section, with a view to permanently revoking its status.</p>
<p><b>Investment in infrastructure and services to support sustainable modes in Bromsgrove urban area.</b></p>	<p>Bromsgrove has the worst developed walking and cycling links in Worcestershire. This has a significant detrimental impact on local accessibility, as local residents are left with few options but to drive to access the services and facilities they need. As part of the Bromsgrove District Plan, major investment is proposed in walking and cycling infrastructure across the town to support increased modal shift towards low carbon modes</p>



	of transport; particularly for shorter journeys.
<p><b>Strategic decision making on accessibility measures in Bromsgrove Town Centre</b></p>	<p>It is essential that the AQMA group for Bromsgrove strongly influence the approach to investment in highway infrastructure in Bromsgrove Town Centre.</p> <p>Investments to improve vehicular capacity in the town centre will attract more traffic. With its mediaeval street layout, this may not be the most appropriate solution for Bromsgrove, as many of these streets form street canyons, which will lead to further AQMA designation.</p> <p>For example, currently, the A448 is used as a rat-run by freight vehicles between the Wyre Forest Towns and the M42. There may be a case to consider an aggressive weight restriction to discourage use of this route by freight, as alternative routes exist.</p> <p>Another more aggressive option could be strategic road closures (to make routes less attractive to 'through' traffic. For example:</p> <p>Closure of the Stratford Road (A442) to through traffic at the Slideslow junction. This could:</p> <ul style="list-style-type: none"> <li>• <i>Improve the efficiency of the congested Slideslow Roundabout</i></li> <li>• <i>Improve conditions for pedestrians and cyclists at the top of the High Street</i></li> <li>• <i>Improve the efficiency of the Parkfield Junction</i></li> <li>• <i>Discourage freight through traffic between the Wyre Forest Towns and the M5/M42</i></li> </ul> <p>However, this may result in increased traffic in the Worcester Road AQMA, so would need to be modelled and considered as part of an integrated solution.</p>

## Recommendations

In the case of the Redditch Road AQMA, Worcestershire County Council Highways and Transport recommends that the group seeks to influence and promote investment in improving the capacity of the strategic A38 Bromsgrove Eastern Bypass Corridor to improve traffic flow. Ensuring

that this strategic transport corridor flows freely and operates efficiently will draw traffic away from the sensitive urban core of the town.

Within Bromsgrove (specifically the Worcester Road AQMA), it is suggested that a long-term strategic transport vision is prepared for the town, which is then shared with key decision makers. The historic town centre (and its historic approaches) has a finite capacity, which is now being reached on occasion. Promotion of more space-efficient and lower carbon modes of transport (particularly walking and cycling, but also passenger transport and powered two-wheelers) will increase the overall accessibility of the town centre, by optimising the amount of people that can access the area, rather than focussing on improving accessibility for car users. Consideration of accessibility restraint mechanisms for polluting vehicles (such as a weight restriction), or road closures to discourage through traffic could be considered to reduce the attractiveness of the town for through trips, enabling the town to refocus on being a destination.

## **BROMSGROVE URBAN AQMAS**

### **WRS COMMENTS/UPDATE TO COUNTY TRANSPORT ISSUES DISCUSSION PAPER**

Following completion of the Worcestershire County Council Transport Issues Discussion Paper for the Bromsgrove Urban AQMAS the WRS Land, Air & Water Quality Team met with Martin Rowe from Worcestershire County Council. At the meeting the proposals made by the County Council were discussed in more detail along with any initial comments and concerns raised by WRS. The meeting provided substantial additional information and allowed a series of focused recommendations to be developed.

An update for each of the priority actions previously outlined by WRS is provided below, along with further discussion of the proposals made by Worcestershire County Council.

#### New actions identified in WCC Discussion Paper

The Bromsgrove Urban AQMAS exists as a result of traffic related emissions. As such improving transport systems around the area is integral to improving air quality. It is evident that the Bromsgrove transport network has a finite capacity and that capacity is now, on occasion, being reached. It is clear that major infrastructure changes are required to accommodate the increased in capacity that will arise as a result of the significant development planned as part of the Bromsgrove District Plan.

As the County Discussion Paper outlines, both Bromsgrove District Council and Worcestershire County Council recognise that capacity is a major issue and therefore major investment in capacity enhancement along the A38 Eastern Bypass Corridor (Wychbold to Lickey End) is planned. Such action has not previously been considered as a viable option by WRS due to the cost of such a scheme. However, WRS believe that such enhancements have the potential to significantly improve air quality in all three of the Bromsgrove AQMAS (Redditch Road, Worcester Road and Lickey End) and the proposals should be supported. WRS believe the Bromsgrove AQMA sub-group will have a significant role in the process, from the outset, to ensure that improving air quality in Bromsgrove features high on the agenda and is addressed by any final scheme design. WRS understand that A38 Eastern Bypass enhancements are the number one priority for the County Council in north Worcestershire.

Recommendation: Sub-group members to actively promote and support major enhancement of the A38 Eastern Bypass corridor and play an active role in scheme design.

Recommendation: It is suggested given the cross-over with the Lickey End AQMA relating to large scale improvements of the Bromsgrove highways network and strategy to promote flexible working, that the Lickey End AQMA sub-group is merged with that of the Bromsgrove Urban AQMA sub-group. This proposal is to be discussed at the next Steering group or sub-group meeting.

#### WRS AQAP priority actions identified for Bromsgrove Urban AQMAS update

### **Alteration to traffic light phasing (priority action 5.1.1 Redditch Road)**

WRS believe that this action should be progressed as part of the wider A38 Eastern Bypass corridor enhancement scheme. It is unlikely to receive support and secure funding outside of the wider scheme. It will also be an advantage to assess traffic light phasing at the Hanbury Turn junction in conjunction with the junctions to which it is linked along the network.

### **Two in road bus stops on carriageway either side of central street canyon (priority action RR7 Redditch Road)**

WRS believe that this action should be progressed as part of the wider A38 Eastern Bypass corridor enhancement scheme. It is unlikely to receive support and secure funding outside of the wider scheme. It will also be an advantage to assess this action in conjunction with the wider public transport provision along the A38 Eastern Bypass corridor.

### **Promote flexible working arrangements (priority action 5.3.4 Redditch Road)**

This action will form part of a proposal to roll out personal travel planning services (provided by Worcestershire County Council) to new developments as part of a wider Choose Worcestershire initiative aimed at encouraging use of sustainable modes of transport. Personal travel planning services (provided in the home) have been trialled as part of the Choose How You Move initiative in Redditch. The initiative has been run by Worcestershire County Council and Redditch Borough Council and has been shown to be successful in terms of encouraging individuals to take up alternative modes of transport (namely walking, cycle and public transport). It is envisaged that such a service could be developer funded and/or LEP led.

Recommendation: Sub-group members to promote and support proposals for Choose Worcestershire.

### **Freight Quality Partnership (priority action 5.2.2 Redditch Road)**

Due to recent budget constraints Worcestershire County Council no longer have a freight quality function. WCC have indicated that an update to WCC Lorry Route map may possibly be funded as a project via various economic teams/functions which WRS support. However, WRS believe that further progress in this action, which affects a number of AQMAs across Worcestershire, should be investigated further.

Recommendation: WRS recommend the Steering Group consider formation of a separate sub group potentially including WRS, representation from Freight Trade Associations and interested members may be appropriate to progress this action common to many AQMAs.

### **Promote walking and cycling initiatives in Worcestershire (priority action 5.3.8 Worcester Road)**

This action will form part of a proposal to roll out personal travel planning services (provided by Worcestershire County Council) to new developments as part of a wider Choose Worcestershire initiative aimed at encouraging use of sustainable modes of transport. Personal travel planning services (provided in the home) have been trialled as part of the Choose How You Move initiative in Redditch. The initiative has been run by Worcestershire County Council and Redditch Borough Council and has been shown to be successful in terms of encouraging individuals to take up alternative modes of

transport (namely walking, cycle and public transport). It is envisaged that such a service could be developer funded and/or LEP led.

Recommendation: Sub-group members to promote and support proposals for Choose Worcestershire.

**Zebra crossing at Hanover Street/Worcester Road (priority action WR3 Worcester Road)**

WRS believe that this action should be progressed as part of the wider A38 Eastern Bypass corridor enhancement scheme. It is unlikely to receive support and secure funding outside of the wider scheme.

Recommendation: WRS to negotiate progressing this action via the wider enhancement scheme planned for the Bromsgrove area.

**Travel planning (priority action 5.3.1 Worcester Road)**

This action will form part of a proposal to roll out personal travel planning services (provided by Worcestershire County Council) to new developments as part of a wider Choose Worcestershire initiative aimed at encouraging use of sustainable modes of transport. Personal travel planning services (provided in the home) have been trialled as part of the Choose How You Move initiative in Redditch. The initiative has been run by Worcestershire County Council and Redditch Borough Council and has been shown to be successful in terms of encouraging individuals to take up alternative modes of transport (namely walking, cycle and public transport). It is envisaged that such a service could be developer funded and/or LEP led.

Recommendation: Sub-group members to promote and support proposals for Choose Worcestershire.

**Shrubbery Road/Worcester Road junction review (priority action WR9 Worcester Road)**

WRS believe that this action should be progressed as part of the wider A38 Eastern Bypass corridor enhancement scheme. It is unlikely to receive support and secure funding outside of the wider scheme.

Recommendation: WRS to negotiate progressing this action via the wider enhancement scheme planned for the Bromsgrove area.

**Next Steps**

Discuss and plan way forward for sub-group at next Steering Group or separately arranged sub-group meeting.

# HORSEFAIR / COVENTRY STREET, KIDDERMINSTER AIR QUALITY MANAGEMENT AREA TRANSPORT ISSUES DISCUSSION PAPER



## Background

For background details of the designation of the Horsefair/Coventry Street, Kidderminster AQMA, please refer to extensive data and commentary provided on the Worcestershire Regulatory Services website:

- [www.worcsregservices.gov.uk/pollution/air-quality.aspx](http://www.worcsregservices.gov.uk/pollution/air-quality.aspx)

## Route Function and Local Economy

The Horsefair/Coventry Street, Kidderminster AQMA includes:

- The Horsefair and Blackwell Street (A451) which forms the main route between Kidderminster Town Centre and Stourbridge and the Black Country Towns;
- Kidderminster Ringway (A456/A451) from the junction with Blackwell Street to the Kidderminster Health Centre, which forms the hub of the Wyre Forest's strategic highway network, with routes radiating out from the Ringway in all directions;
- Coventry Street (A456) from the junction with the Kidderminster Ringway to the vicinity of St Ambrose's Roman Catholic Church, which forms the main route between Kidderminster and the M5, Birmingham, Halesowen and southern Black Country Towns.

The highway network in Kidderminster was aggressively redesigned in the 1970s and 1980s to create a 'concrete collar' around Kidderminster Town Centre. This approach to highway construction has now been discredited, as it has the effect of drawing traffic into urban centres and severing access to central areas for pedestrians and cyclists.

## Development Growth

Development growth is planned for Kidderminster and more specifically the Churchfields area (which includes most of the Horsefair/Coventry Street AQMA) in the Wyre Forest Core Strategy. The Churchfields Masterplan Supplementary Planning Document can be viewed here:

[www.wyreforestdc.gov.uk/media/105872/Churchfields-Master-Plan-FINAL-reduced-Adoption-.pdf](http://www.wyreforestdc.gov.uk/media/105872/Churchfields-Master-Plan-FINAL-reduced-Adoption-.pdf)

The Wyre Forest Core Strategy can be viewed here:  
[www.wyreforestdc.gov.uk/media/89829/Adopted-Core-Strategy-DPD.pdf](http://www.wyreforestdc.gov.uk/media/89829/Adopted-Core-Strategy-DPD.pdf)

## Approach

Currently, all designated Air Quality Management Areas (AQMAs) in Worcestershire are the result of vehicular emissions. In strategic terms, to bring air pollutant levels below identified threshold levels in AQMAs caused by vehicular emissions, mitigation options are either to:

3. Improve dispersion of pollutants, for example through landscaping, junction redesign and/or building demolition, or;
4. Reduction or reallocation of traffic away from the polluted area.

The proposals in the Churchfields Masterplan involve significant landscaping, junction redesign and building demolition, which are very likely to improve accessibility for all modes, emissions dispersal and lead to the AQMA significantly reducing in size. However, the Churchfields Masterplan does not explicitly cover the Ringway/Coventry Street junction or Coventry Street elements, so this discussion paper will focus more specifically on this part of the AQMA.

## Objectives

The following objectives to mitigate air quality deterioration in Horsefair/Coventry Street AQMA are proposed:

4. To limit idling/stationary traffic within the designated Horsefair/Coventry Street AQMA;
5. To preserve and enhance accessibility by all modes throughout the designated Horsefair/Coventry Street AQMA, recognising that the street is lined with specialist shops and trip attractors such as the Regal Cinema. This is essential to support the local economy.

Assessment of Options	
<b>Operation of the Kidderminster Ringway</b>	<p>At the risk of being overly simplistic; critical to the mitigation and improvement of the Horsefair/Coventry Street AQMA is the efficiency of the Kidderminster Ringway and its junctions.</p> <p>The Churchfields Masterplan proposes signalisation of the Blackwell Street junction, to include improved pedestrian/cycle crossing facilities over the busy Kidderminster Ringway, and landscaping to improve the attractiveness of the area.</p>

## Recommendation

It is proposed that the Horsefair/Coventry Street, Kidderminster AQMA group focusses on promoting a major scheme to improve the efficiency of the Kidderminster Ringway. Conversion and removal of all roundabouts in favour of linked, signalised junctions (as has been delivered in other similar highway layouts in Birmingham City Centre, Stourbridge and Halesowen, for example) could deliver the following benefits:

- The ability to micromanage traffic flows through Kidderminster's central network using packages such as SCOOT (Signal Control Offset Optimisation Technique) or MOVA (Microprocessor Optimised Vehicle Actuation) to link signals together to respond dynamically to multimodal traffic demand, keeping traffic moving and improving accessibility for all.
- Significantly improved, at-grade (surface level) pedestrian and cycle crossing facilities, to 'break the concrete collar' around Kidderminster Town Centre.
- Supporting opportunities for redevelopment and further landscaping of the central area of Kidderminster, to improve the attractiveness and utility of the town centre which meets the needs of residents, businesses and visitors to the town, enabling it to compete with nearby local centres.



## **HORSEFAIR, KIDDERMINSTER AQMA**

### **WRS COMMENTS/UPDATE TO COUNTY TRANSPORT ISSUES DISCUSSION PAPER**

Following completion of the Worcestershire County Council Transport Issues Discussion Paper for the Horsefair AQMA the WRS Land, Air & Water Quality Team met with Martin Rowe from Worcestershire County Council. At the meeting the proposals made by the County Council were discussed in more detail along with any initial comments and concerns raised by WRS. The meeting provided substantial additional information and allowed a series of focused recommendations to be developed.

An update for each of the priority actions previously outlined by WRS is provided below, along with further discussion of the proposals made by Worcestershire County Council.

The Horsefair AQMA exists as a result of traffic related emissions. As such the key to improving air quality is improving transport systems around the area.

#### **Alteration to traffic light phasing light systems (priority action 5.1.1)**

This action is incorporated and, to some extent, superseded by the major infrastructure changes included in the Churchfields Masterplan and wider recommendations made by Worcestershire County Council in the Transport Issues Discussion Paper. The Masterplan and Discussion Paper propose the removal of all roundabouts along the Kidderminster Ringway and replacement with SCOOT or MOVA signalised systems to allow micromanagement of traffic flows. WRS believe that this approach will significantly improve flow and in turn levels of nitrogen dioxide within the AQMA. These proposals form part of wider plans to improve the accessibility and attractiveness of Kidderminster.

In addition to proposals to replace roundabouts with a signalised system the scheme would provide significant benefits for pedestrians and cyclists. WRS believe that this benefit, whilst unlikely to have a significant impact on air quality within the AQMA, is important for the promotion of alternative modes of transport.

Worcestershire County Council have invested in a multi-modal model for the Kidderminster area in order to test various infrastructure scenarios.

WRS understand that there is a strong will to implement such schemes in Kidderminster and that some funding streams currently exist and others are being explored.

Recommendation: Sub-group members actively support and promote proposals for a major scheme to improve the Kidderminster Ringway. What this support/promotion looks like can be discussed further as part of any sub-group meeting.

#### **Promote flexible working arrangements (priority action 5.3.4)**

This action will form part of a proposal to roll out personal travel planning services (provided by Worcestershire County Council) to new developments as part of a wider Choose Worcestershire initiative aimed at encouraging use of sustainable modes of transport. Personal travel planning services (provided in the home) have been trialled as part of the Choose How You Move initiative in Redditch. The initiative has been run by Worcestershire County Council and Redditch Borough Council and has been shown to be successful in terms of encouraging individuals to take up alternative modes of transport (namely walking, cycle and public transport). It is envisaged that such a service could be developer funded and/or LEP led.

Recommendation: Sub-group members to promote and support proposals for Choose Worcestershire.

#### **Freight Quality Partnership (priority action 5.2.2)**

Due to recent budget constraints Worcestershire County Council no longer have a freight quality function. However WRS believe that this action, which affects a number of AQMAs across Worcestershire, should be investigated further. It is possible that review/revision of the Lorry Route Map could be funded as a project via various economic teams/functions.

Recommendation: WRS recommend the Steering Group consider formation of a separate sub group potentially including WRS, representation from Freight Trade Associations and interested members may be appropriate to progress this action common to many AQMAs.

#### **Loading and unloading restrictions during peak times (priority action 5.1.5)**

Loading and unloading restrictions at peak times currently exist along Horsefair. Enforcement of these restrictions is identified as the key issue with regard to this as people stop along the stretch to pop into shops, unload/load vehicles etc.

Recommendation: Sub-group member pursue improvements in enforcement of the existing restrictions with Wyre Forest District Council.

# KIDDERMINSTER ROAD, HAGLEY AIR QUALITY MANAGEMENT AREA TRANSPORT ISSUES DISCUSSION PAPER

## Background

For background details of the designation of the Kidderminster Road, Hagley AQMA, please refer to extensive data and commentary provided on the Worcestershire Regulatory Services website:

- [www.worcsregservices.gov.uk/pollution/air-quality.aspx](http://www.worcsregservices.gov.uk/pollution/air-quality.aspx)

## Route Function and Local Economy

The AQMA at Kidderminster Road, Hagley consists of two strategic junctions and their approaches:

- The Hagley Island is a major roundabout where the A456 (Kidderminster Road) meets the A491 (Stourbridge Road).
- The signalised junction at the foot of Hagley Hill of the A491 (Stourbridge Road) and A456 (Kidderminster Road/Birmingham Road).

The AQMA has developed around the intersection of these two busy strategic routes. Whilst alternative routes exist, both these routes provide the most direct access between major urban areas and the M5 (strategic highway network) which results in focussed demand on these routes.

## Development Growth

Of particular relevance is the recent decision by Bromsgrove District Council to approve the development of 175 new homes on land adjacent to the junction of the A456 (Bromsgrove Road) and A491 (Kidderminster Road). This development is contributing towards junction enhancements at both strategic junctions, which will include enhanced accessibility features (crossings and paths) for pedestrians and cyclists.

## Approach

Currently, all designated Air Quality Management Areas (AQMAs) in Worcestershire are the result of vehicular emissions. In strategic terms, to bring air pollutant levels below identified threshold levels in AQMAs caused by vehicular emissions, mitigation options are either to:

5. Improve dispersion of pollutants, for example through landscaping, junction redesign and/or building demolition, or;
6. Reduction or reallocation of traffic away from the polluted area.

As all buildings are already set back from the road, and are made up predominantly of detached and semi-detached properties, building

demolition would not deliver the air quality improvements required in this location. Similarly, the area already benefits from extensive landscaping, with many properties screened from the main routes with hedges and other foliage barriers. However, junction design is currently poor, and there may well be a strong case to enhance junction design to improve vehicular capacity and reduce idling/stationary traffic, leading to an improvement in local environmental quality.

Although Option 2 may seem an attractive option, the removal of strategic traffic from this corridor would require significant investment in an alternative route, which would be prohibitively expensive and cause severe detriment to the attractive surrounding countryside.

**Objectives**

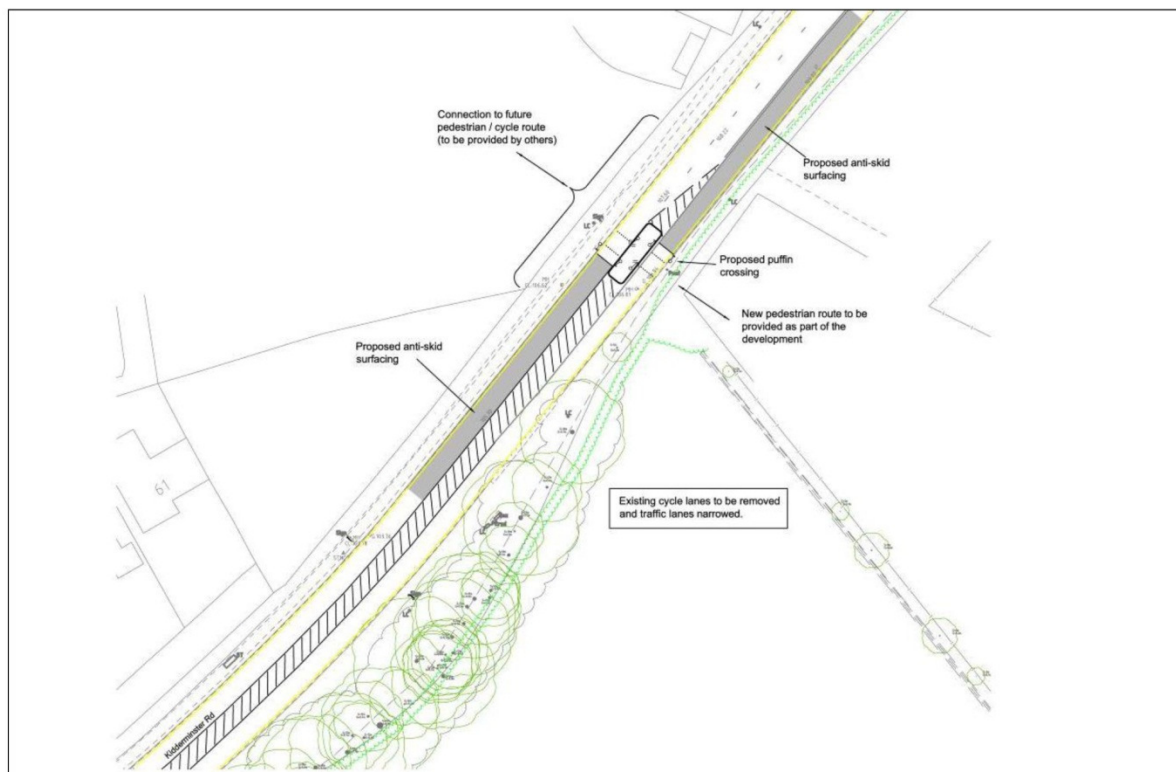
The following objectives to mitigate air quality deterioration in the Hagley AQMA are proposed:

- 6. To limit idling/stationary traffic within the Hagley AQMA through removal of obstructions which prevent the free flow of traffic;
- 7. To preserve accessibility by all modes throughout the Hagley AQMA, recognising that the two routes bisect a thriving village community.

Assessment of Options	
Despite the presence of traffic management orders throughout the AQMA to prohibit waiting traffic, there are a number of obstacles to the free flow of strategic traffic within the Hagley AQMA. From east to west, these are:	
<b>Signalised Junction of A491 (Stourbridge Road) with A456 (Kidderminster Road/Birmingham Road)</b>	This signalised junction includes integrated pedestrian crossing facilities. The signalling equipment is ageing, and may benefit from investment in new equipment and junction realignment (if required) to increase the capacity and efficiency of this junction. The use of a signal control optimisation package such as MOVA could be particularly beneficial.
<b>Signalised pedestrian crossing outside Aston Martin Garage (A456)</b>	There is potential to link this pedestrian crossing signal set with the aforementioned signalised junction, to limit overall vehicular delay.

<p><b>Signalised pedestrian crossing on approach to Hagley Island (A456)</b></p>	<p>See below.</p>
<p><b>The Hagley Island (junction of A456 Kidderminster Road with A491 Stourbridge Road)</b></p>	<p>As part of the recent Cala Homes development, a major enhancement scheme is proposed to improve capacity at this island and integrate the above signalised pedestrian crossing into a multiphased, multimodal junction arrangement.</p> <p>It is also to be noted that the Cala Homes development includes the provision of an additional signalised pedestrian crossing on the A456, to link the new development to Hagley Primary School, the railway station and the village centre. Plans of both of these measures are provided below.</p>





## Recommendations

The Hagley AQMA is currently borderline. It is suggested that the Hagley AQMA subgroup pursues an integrated approach to junction redesign of all 'obstacles' above as part of a developer-funded major investment package. This should improve the efficiency of these two strategic junctions and adjacent pedestrian crossing facilities, reducing journey time delay (idling and stationary traffic) leading to environmental quality improvements and the permanent revocation of the Hagley AQMA.

## Kidderminster Road, Hagley AQMA Sub Group

### Update November 2014

In Worcestershire Regulatory Services (WRS) opinion, Worcestershire County Council's (WCC) Transport Issues Discussion Paper directly supports the implementation of three of five priority Air Quality Action Plan (AQAP) actions identified by WRS from cost-benefit analysis process. WRS Land, Air & Water Quality Team met with Martin Rowe from WCC to discuss the proposals made by WCC and initial comments from WRS.

#### WRS AQAP priority actions identified for Hagley, AQMA update

##### **KR5 - Review of signalised junction at foot of Hagley Hill of A456 and A491.**

In the discussion paper WCC propose that an update of equipment and junction realignment, potentially change to MOVA, would be beneficial to this junction. In the discussion paper above, WCC recommend the sub-group pursues a junction redesign of all obstacles as part of developer-funded investment package. WRS believe this approach to funding will predominately require communication and agreement between Worcestershire County Council Highways Planning Team, Bromsgrove District Council Development Control team and prospective developers. However, WCC have indicated funding may be available from other sources such as the Local Enterprise Partnership (LEP) or EU funding streams.

**5.1.1 - Alteration of phasing of traffic light systems.** Potentially link pedestrian crossing outside Aston Martin Garage on A456 to new signalised junction and funding package, as described above.

**5.1.8 - Introduction of traffic signals at Hagley Island roundabout.** Major enhancement scheme is proposed as part of the Cala Homes development. WCC have confirmed this at design stage at present. WRS have requested that a timeline for completion of these works is provided.

Two other actions proposed by WRS, as detailed below, are not directly addressed in the paper but were discussed in the meeting between WRS and WCC:

**5.1.4 - Variable Messaging Systems.** The aim of this proposed action is to utilise existing road matrix in vicinity and potentially new infrastructure to encourage traffic, HGV vehicles, to avoid routes through AQMA. WCC have proposed that this could be more effectively achieved and resourced at WCC through future updates to Satellite Navigation software and WRS support this initiative.

**5.2.2 - Freight Quality Partnership.** WCC have indicated that an update to WCC Lorry Route map will be considered but further resource is not currently available. However, WRS believe that further progress in this action, which affects a number of AQMAs across Worcestershire, should be investigated further. WRS recommend the Steering Group consider formation of a separate sub group



potentially including WRS, representation from Freight Trade Associations and interested members may be appropriate to progress this action common to many AQMAs.

#### New actions identified in WCC Discussion Paper

A new action discussed within the paper but not previously identified within the AQAP is removal of strategic traffic from the AQMA corridor, presumably by provision of new diversionary road. However, WCC conclude this would require significant investment, be prohibitively expensive and cause severe detriment to the surrounding countryside. WRS will undertake cost benefit analysis of this option along with any other new AQAP actions identified in spring 2015. However, it is likely that the cost and lengthy timeline for implementation would prohibit this option from becoming a priority action for the sub-group. Kidderminster Road has historically demonstrated a 'borderline' AQMA trend and it is anticipated that more cost and time effective measures as proposed above will provide sufficient emissions reduction required to revoke the AQMA in the future.

#### Next steps

WRS propose the Hagley AQMA sub-groups next step should be to discuss available funding stream options further and produce/progress a plan for funding applications.

## LICKEY END, BROMSGROVE AIR QUALITY MANAGEMENT AREA TRANSPORT ISSUES DISCUSSION PAPER

For background details of the designation of the Lickey End, Bromsgrove AQMA, please refer to extensive data and commentary provided on the Worcestershire Regulatory Services website:

- [www.worcsregservices.gov.uk/pollution/air-quality.aspx](http://www.worcsregservices.gov.uk/pollution/air-quality.aspx)

### Route Function and Local Economy

Lickey End, Bromsgrove AQMA is, in effect, Junction 1 of the M42. The local road network is made up of the A38 and the B4096, which converge on the junction.

### Development Growth

Through the emerging Bromsgrove District Plan, significant development growth is proposed for Bromsgrove, particularly around the western fringes of the town between the existing urban area and the M5. Bromsgrove already has a large number of residents which commute into the West Midlands Conurbation for employment. Further details of this planned development growth can be viewed at:

[www.bromsgrove.gov.uk/cms/environment-and-planning/planning/strategic-planning/bromsgrove-district-plan.aspx](http://www.bromsgrove.gov.uk/cms/environment-and-planning/planning/strategic-planning/bromsgrove-district-plan.aspx)

### Approach

Currently, all designated Air Quality Management Areas (AQMAs) in Worcestershire are the result of vehicular emissions. In strategic terms, to bring air pollutant levels below identified threshold levels in AQMAs caused by vehicular emissions, mitigation options are either to:

7. Improve dispersion of pollutants, for example through landscaping, junction redesign and/or building demolition, or;
8. Reduction or reallocation of traffic away from the polluted area.

**Junction 1 of the M42 is too small to accommodate the level of traffic which uses it.** Therefore, to adequately mitigate this AQMA, bold decision making will be required.

### Objectives

The following objectives to mitigate air quality deterioration in the vicinity of Junction 1 of the M42 (Lickey End, Bromsgrove AQMA) are proposed:

8. To relocate idling/stationary traffic away from the area

9. To limit or remove obstructions which prevent the free flow of traffic

<b>Assessment of Options</b>	
<b>Major Junction Expansion to accommodate existing and future demand</b>	The current layout of the M42, Junction 1 is too small to accommodate the level of traffic which uses it on a daily basis. This option would require the demolition of a number of adjacent properties to expand the junction to resolve current congestion and accommodate future growth. This option would provide the opportunity to consider landscaping to ensure efficient dispersal of vehicular emissions, leading to the revocation of the Lickey End AQMA.
<b>Stopping up of the B4096 (Alcester Road/Old Birmingham Road)</b>	The B4096 leads to residential areas either side of Junction 1 of the M42. Stopping up these accesses could significantly improve the efficiency of this junction, by reducing the accesses to the roundabout to only four arms.

### **Recommendation**

It is proposed that the group lobbies Worcestershire County Council and Bromsgrove District Council planning and highways departments to ensure that this issue is explicitly considered within the development of the transport packages for the Bromsgrove Local Plan, and to engage with the Highways Agency to model the options above to test their likely efficacy. A preferred option should then be pursued jointly between Bromsgrove District Council, Worcestershire County Council and the Highways Agency to resolve this strategic bottleneck permanently, leading to the ultimate revocation of this challenging AQMA.

## Lickey End, Bromsgrove AQMA Sub Group Update November 2014

The Worcestershire Regulatory Services Land, Air and Water Quality team met with Martin Rowe from Worcestershire County Council to review the County's Transport Issues Discussion Paper for the Lickey End AQMA. During the meeting the proposals were discussed in more detail in relation to the prioritised actions identified from the Action Plan.

An update for each of the priority actions previously outlined by WRS is provided below, along with further discussion of the proposals made by Worcestershire County Council.

### New actions identified in WCC Discussion Paper

The paper outlines two major proposals that have the potential to improve air quality in the locality. The first proposal is a major junction expansion to accommodate existing and future demand. The current layout of the M42 Junction 1 is considered too small to accommodate the level of daily traffic. Adjacent properties would need to be demolished to expand the junction and allow for appropriate landscaping to allow for efficient dispersal of emissions. This option is envisaged to have a very high financial cost but may form part of the wider A38 improvements to allow for the large expansion of Bromsgrove.

The second option is the blocking off of the B4096 Alcester Road/Old Birmingham Road to form a single route and reduce the M42 Junction 1 to only four arms.

Lickey End AQMA and the other Bromsgrove AQMAs exist as a result of traffic related emissions. As such improving transport systems around the area is integral to improving air quality. It is evident that the Bromsgrove transport network has a finite capacity and that capacity is now, on occasion, being reached.

Major investment and development is planned along the A38 Eastern Bypass to improve capacity and reliability. With two AQMA's along this corridor it is important for WRS to be represented on the board to engage with WCC and BDC Planning and Highways Departments to ensure the air quality issues are addressed within the wider transport packages for the Bromsgrove Local Plan.

### WRS Air Quality Action Plan priority actions identified for Lickey End, AQMA update

None of the prioritised actions have been specifically referred to in the WCC paper. It has been highlighted that none of these actions will be taken forward by WCC in isolation given the current strategic framework aimed at improvements on a much larger scale. It has been indicated that the actions relating to highways could be taken forward as part of the larger development of the A38 given the appropriate support.

**LE6 – Traffic Exiting Barnsley Hall Road Right** - This action is for a no right turn restriction. This action won't be supported by WCC in isolation but could form part of a wider proposal such as part of the A38 project.

**5.1.1 – Alteration to Phasing of Traffic Light Systems** - As referred to above this would only be considered as part of wider improvements.

**LE7 – Turning right into Harvester PH from A38 South** - This action is for a no right turn restriction. This action won't be supported by WCC in isolation but could form part of a wider proposal.

**LE4 – Narrowing of Two Lanes Into One Causes Bottleneck at Top of A38 South** - Action is for the review of the junction. This action won't be supported by WCC in isolation but could form part of a wider proposal.

**5.3.4 – Promote Flexible Working Arrangements** - This action will form part of a proposal to roll out personal travel planning services (provided by Worcestershire County Council) to new developments as part of a wider Choose Worcestershire initiative aimed at encouraging use of sustainable modes of transport. Personal travel planning services (provided in the home) have been trialled as part of the Choose How You Move initiative in Redditch. The initiative has been run by Worcestershire County Council and Redditch Borough Council and has been shown to be successful in terms of encouraging individuals to take up alternative modes of transport (namely walking, cycle and public transport). It is envisaged that such a service could be developer funded and/or LEP led.

#### Recommendations

As outlined above the prioritised actions will not be supported by WCC and Highways in isolation given plans for expansion in Bromsgrove and the requirement for significant improvements in the road network. All actions could be considered as part of the wider A38 Eastern Bypass expansion plan. Representation is needed by WRS to ensure issues relating to the AQMAs are considered within the wider developments.

It is suggested given the cross-over with the Bromsgrove Urban AQMAs relating to large scale improvements of the Bromsgrove highways network and strategy to promote flexible working, that the Lickey End AQMA sub-group is merged with that of the Bromsgrove Urban AQMA sub-group. This proposal is to be discussed at the next Steering group or sub-group meeting.

# PORT STREET, EVESHAM AIR QUALITY MANAGEMENT AREA TRANSPORT ISSUES DISCUSSION PAPER

## Background

For background details of the designation of the Port Street, Evesham AQMA, please refer to extensive data and commentary provided on the Worcestershire Regulatory Services website:

- [www.worcsregservices.gov.uk/pollution/air-quality.aspx](http://www.worcsregservices.gov.uk/pollution/air-quality.aspx)

## Route Function and Local Economy

Port Street (B4035) is the main route into Evesham Town Centre from the east, and so provides a strategic accessibility function. It is critical to the functioning of Evesham's visitor-focussed economy, providing the most direct route between Evesham town centre and the nearby Cotswold 'honeypots' of Chipping Campden and Broadway.

The historic street pattern of the town and the River Avon loop has resulted in relatively few alternative routes into and out of the Town Centre, (limited by bridge crossings). The main alternatives to Port Street involve a lengthy detour along the A46 (Evesham Bypass) and then entering the town from the north or south along the A4184, which is generally considered unattractive and would result in significantly increased overall journey times.

## Development Growth

Significant development growth is planned for Evesham. In specific relation to Port Street, development sites have been identified in the South Worcestershire Development Plan on Offenham Road, on land near Drakes Lea and at locations in a number of villages in the Vale, for which Evesham is the nearest service centre. Cumulatively, these developments are likely to result in uplift in traffic in Port Street, particularly at peak times.

## Approach

Currently, all designated Air Quality Management Areas (AQMAs) in Worcestershire are the result of vehicular emissions. In strategic terms, to bring air pollutant levels below identified threshold levels in AQMAs caused by vehicular emissions, mitigation options are either to:

9. Improve dispersion of pollutants, for example through landscaping, junction redesign and/or building demolition, or;
10. Reduction or reallocation of motorised traffic away from the polluted area.

As a historic shopping street with a number of listed buildings, building demolition would be inappropriate for Port Street. However, the built environment forms a 'street canyon', which prevents dispersal of vehicular emissions. The evidence provided by WRS in the Air Quality Action Plan suggests that idling traffic is the principal cause of deteriorated air quality in Port Street, with exceedances of Nitrogen Dioxide occurring in the vicinity of the Regal Cinema. In this location, a mix of Options 1 and 2 is likely to deliver the best results.

**Objectives**

The following objectives to mitigate air quality deterioration in Port Street are proposed:

- 10. To relocate idling/stationary traffic away from Port Street;
- 11. To limit or remove obstructions which prevent the free flow of traffic within Port Street;
- 12. To preserve accessibility by all modes throughout the Port Street AQMA, recognising that the street is lined with specialist shops and trip attractors such as the Regal Cinema. This is essential to support the local economy.

<b>Assessment of Options</b>	
Despite the presence of traffic management orders throughout the AQMA to prohibit waiting traffic, there are a number of obstacles to the free flow of traffic within the Port Street AQMA. From east to west, these are:	
<b>'Lidl' Roundabout</b>	This junction currently permits free-flow traffic into the AQMA. It is recommended that signalisation of this junction is explored, to limit traffic flows entering the Port Street AQMA and prevent queuing traffic in this sensitive area. This would relocate traffic queues into Elm Road and Broadway Road, however the built environments in both of these tributary routes are better suited to enabling dispersal of vehicular emissions.
<b>Signalised pedestrian crossing near junction with Shor Street</b>	A review of pedestrian crossing requirements in Port Street could be undertaken to assess the utility of these crossings. If these are being 'called' regularly as a result of high pedestrian demand to cross, it might be that redesign of the street in favour of informal crossings (together with a reduced speed limit of 20mph) could improve
<b>Signalised pedestrian crossing</b>	

near Regal Cinema	traffic flow and accessibility for all modes.
<b>Signalised junction with Waterside and Workman Bridge.</b>	Explore whether this could be redesigned as a mini-roundabout configuration, to minimise idling traffic. However, this would require the provision of a safe pedestrian crossing facility in the vicinity of Waterside to replace the existing informal crossing provided as part of the signal set.

### Recommendation

Funding is sought to develop a remediation scheme for this corridor, which explores the options above and provides a detailed design for a costed solution, which the group can then both promote and source funding to enable delivery.



## **PORT STREET, EVESHAM**

### **WRS COMMENTS/UPDATE TO COUNTY TRANSPORT ISSUES DISCUSSION PAPER**

Following completion of the Worcestershire County Council Transport Issues Discussion Paper for Port Street the WRS Land, Air & Water Quality Team met with Martin Rowe from Worcestershire County Council. At the meeting the proposals made by the County Council were discussed in more detail along with any initial comments and concerns raised by WRS. The meeting provided substantial additional information and allowed a series of focused recommendations to be developed.

An update for each of the priority actions previously outlined by WRS is provided below, along with further discussion of the proposals made by Worcestershire County Council.

#### **Upgrading of the traffic signal system at Waterside junction (priority action 5.1.1)**

The traffic light signal system has recently been upgraded to a Vehicle Actuation (VA) system, from the previous fixed time signal setup, by Worcestershire County Council. VA systems are a simple method for allocating green times to different traffic movements between pre-set minimum and maximum green time limits. Vehicles detected during the green phase extend the green period until a gap (exceeding a pre-set critical value) is found or the pre-set maximum is reached.

Worcestershire County Council have advised that this upgrade has resulted in improved traffic flow, however several months of air quality monitoring will be required to determine if there has been any impact on levels of nitrogen dioxide within the AQMA.

#### **Loading and unloading restrictions at peak times (priority action 5.1.5)**

Loading and unloading restrictions at peak times currently exist along Port Street. Enforcement of these restrictions is identified as the key issue with regard to this. It is noted that the fish and chip shop is often a significant contributor to the problem as customers park along Port Street while they visit the shop.

Recommendation: Sub-group member pursue improvements in enforcement of the existing restrictions with Wychavon District Council.

**Wider Port Street AQMA Scheme (as outlined in Assessment of Options table provided in the Worcestershire County Council Port Street discussion paper)**

It is envisaged that this scheme could be implemented relatively quickly and potential funding for schemes such as this in Evesham exists. Martin is currently exploring delivery and funding options with Development Control colleagues at County Council.

It is hoped that successful implementation of this scheme would improve air quality such that the AQMA can be revoked and that the scheme could serve as a 'test case' for other similar areas.

Recommendation: Sub-group members to support and promote proposals and provide assistance as necessary.

**Review of data to clarify degree of improvement required (priority action PS11)**

WRS undertaking data review. Review is nearing completion.

**Bus Quality Partnership (priority action 5.2.1)**

Considering recent cuts to funding of bus services and the relatively small likely impact on air quality in the Port Street area WRS recommended that focus is on the implementation of the actions outlined above. The need for a bus quality partnership can be revisited at a later date if necessary.

# WELCH GATE, BEWDLEY AIR QUALITY MANAGEMENT AREA TRANSPORT ISSUES DISCUSSION PAPER

## Background

For background details of the designation of the Welch Gate, Bewdley AQMA, please refer to extensive data and commentary provided on the Worcestershire Regulatory Services website:

- [www.worcsregservices.gov.uk/pollution/air-quality.aspx](http://www.worcsregservices.gov.uk/pollution/air-quality.aspx)

## Route Function and Local Economy

Welch Gate (B4190) is the former main route into Bewdley Town Centre from the west. The town is now fully bypassed to the south by the A456, which provides an attractive alternative route for strategic traffic away from the historic town centre.

A particular challenge with Bewdley's historic street pattern is its topography. The town sits on the banks of a steep valley. The large residential area to the west of the town sits on the side of this valley, and has only two narrow highway accesses into the town centre; Welch Gate and Park Lane. This has the effect of funnelling local traffic into Welch Gate, due to a lack of suitable alternatives.

The only real alternative to Welch Gate is using the A456 bypass, which involves a lengthy detour to enter the town from the east, which is generally considered unattractive and would result in significantly increased overall journey times.

## Development Growth

Little development growth is planned for Bewdley in the Wyre Forest Core Strategy: [www.wyreforestdc.gov.uk/media/89829/Adopted-Core-Strategy-DPD.pdf](http://www.wyreforestdc.gov.uk/media/89829/Adopted-Core-Strategy-DPD.pdf)

## Approach

Currently, all designated Air Quality Management Areas (AQMAs) in Worcestershire are the result of vehicular emissions. In strategic terms, to bring air pollutant levels below identified threshold levels in AQMAs caused by vehicular emissions, mitigation options are either to:

11. Improve dispersion of pollutants, for example through landscaping, junction redesign and/or building demolition, or;
12. Reduction or reallocation of traffic away from the polluted area.

As a historic shopping street with a number of listed buildings, building demolition would be inappropriate for Welch Gate. However, the built

environment forms a 'street canyon', which prevents dispersal of vehicular emissions. The evidence provided by WRS in the Air Quality Action Plan suggests that idling traffic is the principal cause of deteriorated air quality in Welch Gate.

**Objectives**

The following objectives to mitigate air quality deterioration in Welch Gate are proposed:

- 13.To relocate idling/stationary traffic away from Welch Gate;
- 14.To limit or remove obstructions which prevent the free flow of traffic within Welch Gate;
- 15.To preserve accessibility by all modes throughout the Welch Gate AQMA, recognising that the street is essential to provide access from the large residential area to the west of the town into the town centre for all modes.

**Assessment of Options**

A number of different schemes have been trialled over the years to enable revocation of the AQMA in Bewdley. Unfortunately, despite a number of signal trials and alternative options being explored, little progress has been made. Surveys of users have frequently identified that strategic traffic (through traffic) is not an issue at this AQMA. Deteriorated environmental quality in this location is caused by local people accessing the services and facilities they need in the town centre, by car. The steep gradients between the town centre and the residential area to the west make walking and cycling less attractive, therefore, an improved bus service could provide the most realistic solution for improving accessibility into Bewdley.

**Recommendation**

It is proposed that localised accessibility to the town is considered holistically as part of a strategic plan for Bewdley, as localised interventions by WCC Highways and Transportation have been exhausted. It is suggested that inspiration is drawn from the Cotswold wool towns of Bourton-on-the-Water and Stow-on-the-Wold. These internationally popular tourist attractions have developed aggressive transport strategies which remove traffic from the picturesque historic centres, by closing and removing all town-centre parking and relocating this to a single, large facility within easy access of strategic routes. Investment is made in enhancing the walking route between this major

car park and the historic core. In Bewdley, should this be considered as a viable option, revenues from this car park could be used to fund a low-cost (or even free) electric/low-emissions bus service in the summer months between this site and various locations in the town, to discourage private car use.

The Worcestershire Regulatory Services Land, Air and Water Quality team met with Martin Rowe from Worcestershire County Council to review the County's Transport Issues Discussion Paper for the Welch Gate, Bewdley AQMA. During the meeting the proposals were discussed in more detail in relation to the prioritised actions identified from the Action Plan.

#### New actions identified from WCC Discussion Paper

The paper highlights the fact that a number of different schemes have been trialled in the past without success. Instead it is proposed by WCC that localised accessibility to the town is considered holistically as part of a strategic plan for Bewdley. This would remove traffic from the town centre by closing town centre car parking and relocating to a large, central facility, creating a Park and Walk system. Investment would then be made in enhancing walking routes and low-emission bus service in the summer months. This combined with an improved bus service is anticipated to provide realistic solutions that would meet the air quality objective.

#### WRS Air Quality Action Plan priority actions identified for Welch Gate AQMA update

**WG4 – Normal Length Buses Block Road in Narrow Bends** - The bus services have been cut substantially and a local Bewdley operator has recently gone out of business. WCC no longer have control over the bus services other than school buses. All other services are commercial. Enquiries are being made to identify the services operating in the Bewdley area so that they can be made aware of the situation and asked to voluntarily use shorter buses on these routes.

**5.1.1 Alteration to Phasing of Traffic Light Systems** - As referred to above various signal trials have been undertaken in Bewdley without success. The problem has been identified as two separate pedestrian crossings that hold the traffic up for a significant period of time causing congestion. The proposed action was to link the lights to work effectively together. WCC have indicated this would cost in region of £250k to action due to the layout of local utility services. WCC consider this cost to be prohibitive and do not support further progress in this action at this time.

**5.1.5 Loading and Unloading Restrictions During Peak Traffic Times** - This option has not previously been explored and is considered viable by WCC given the appropriate support. Enquiries are to be made with the manager of the Traffic Management Department at WCC to further assess the viability of this option. Portfolio holders have been identified as Councillor Geraghty, Strategic Transport, and John Smith, Local Transport Management.

**5.1.3 HGV or Weight Restriction on Affected Roads** - As above this option has not been previously explored but is considered to be a potentially viable short term option by WCC. Enquiries are to be made with the manager of the Traffic Management Department at WCC to further assess the viability of this option. Portfolio holders have been identified as Councillor Geraghty, Strategic Transport, and John Smith, Local Transport Management.

## **Recommendations**

The suggested strategy from WCC is at a very early stage and needs to be fully explored to see if it is a viable option. If it were to be adopted it may take a considerable time to implement therefore previously prioritised actions need to be explored further.

As outlined above, the prioritised action relating to traffic light phasing has been previously trialled without success. Any changes to the current setup have been indicated to be cost prohibitive by WCC. The two actions relating to loading and weight restrictions will continue to be explored with the relevant WCC departments.

Further enquiries are to be made relating to the commercial bus services operating in the Welch Gate area to pursue a voluntary agreement to commit shorter buses to the route through the AQMA.

# WORCESTER CITY AIR QUALITY MANAGEMENT AREAS TRANSPORT ISSUES DISCUSSION PAPER

## Background

For background details of the designation and proposals for the various Worcester AQMAs, please refer to extensive data and commentary provided on the Worcestershire Regulatory Services website:

- [www.worcsregservices.gov.uk/pollution/air-quality.aspx](http://www.worcsregservices.gov.uk/pollution/air-quality.aspx)

## Route Function and Local Economy

In common with many cathedral cities with medieval street patterns, the City of Worcester has a number of existing and proposed AQMAs, mainly focussed on the key corridors leading into the City Centre. Existing AQMAs include:

- *Lowesmoor and Rainbow Hill*
- *Dolday*

Borderline/Proposed AQMAs include:

- *St John's District Centre (Proposed)*
- *London Road and Sidbury (Borderline)*
- *Castle Street (Borderline)*
- *Foregate Street (Borderline)*

All the above are on major (key) corridors into or through the City Centre.

## Development Growth

Through the South Worcestershire Development Plan, significant development growth is planned for Worcester City. As the main service centre for south Worcestershire, it is expected that demand to access the services and facilities provided in the city will grow over time.

## Approach

Currently, all designated Air Quality Management Areas (AQMAs) in Worcestershire are the result of vehicular emissions. In strategic terms, to bring air pollutant levels below identified threshold levels in AQMAs caused by vehicular emissions, mitigation options are either to:

13. Improve dispersion of pollutants, for example through landscaping, junction redesign and/or building demolition, or;
14. Reduction or reallocation of traffic away from the polluted area.

Clearly, as a historic city with a protected built environment, Option 1 is unlikely to be viable on many of the main arterial corridors into the



city, or the City Centre. However, sensitive tree planting, junction redesign and landscaping in identified areas may well have some merit.

Therefore, Option 2 is the most appropriate approach for Worcester City, as evidenced by best practice in similar cathedral cities across the UK.

**Objectives**

The following objectives (which align with the Worcester Transport Strategy) to mitigate air quality deterioration in the Worcester City's AQMAs are proposed:

- 16.To remove all strategic traffic out of Worcester City altogether, by providing suitable alternative strategic routes;
- 17.To promote modal shift wherever possible to low-carbon modes of transport within the urban area, to dramatically reduce the amount of local journeys (within city) made by motorised modes;
- 18.To optimise accessibility to trip attractors in Worcester City Centre by non-car modes.

**Assessment of Options**

For many years, Worcester has not had and still does not have a strategic integrated land use and transport planning vision. The Worcester Transport Strategy ([www.worcestershire.gov.uk/WTS](http://www.worcestershire.gov.uk/WTS)) provides a long term strategy for strategic traffic and multimodal corridors throughout the urban area, with the important exception of the city centre. The Worcester City Masterplan provides a vision for the development of the city centre, and the emerging South Worcestershire Development Plan goes a long way to cement this Masterplan vision into policy. However, without a unilaterally agreed approach to transport and land use in the city centre, poor accessibility (expressed as congestion) will remain commonplace in the city centre and its approaches, leading to deteriorated environmental quality and the declaration of further AQMAs.

As part of the Worcester Transport Strategy (although funded via a variety of mechanisms), the following investments in transport infrastructure and services are likely to have a beneficial impact on environmental quality in Worcester City Centre:

<b>Dualling of the Southern Link Road from the Ketch to</b>	With the first phase funded by the Worcester Transport Strategy, and subsequent phases to be funded through a variety of sources, the dualling of the Southern Link Road will be essential to
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<b>Whittington Islands</b>	provide an attractive alternative to travelling through Worcester City Centre for strategic trips, removing this traffic from the historic centre.
<b>Investments in rail stations</b>	As part of the Worcester Transport Strategy, significant investment has been made in Malvern Link and Worcester Foregate Street stations, to improve the capacity and attractiveness of rail as an alternative to the congested A449 corridor between Great Malvern and Worcester.
<b>Investments in the wider Worcester Transport Strategy (Real Time Information System, Variable Messaging Signs, Key Corridor Enhancements including improvements to infrastructure for pedestrians, cyclists and passenger transport users)</b>	<p>Recent investment in Phase 1 of the Worcester Transport Strategy has involved the reconstruction of Lowesmoor and adjacent junctions, and corridor length improvements along Ombersley Road and Tolladine Road to improve conditions for all modes of transport.</p> <p>Further phases of this critical investment plan will be delivered using contributions secured through the South Worcestershire Development Plan's Infrastructure Development Plan.</p> <p>For further details of the planned approach to investment, visit:  <a href="http://www.swdevelopmentplan.org/">http://www.swdevelopmentplan.org/</a></p>

It is the view of WCC Highways and Transport that focussing investment on individual AQMAs in Worcester City will be futile, as this will not deal with the route cause; namely strategic accessibility failure in Worcester City Centre.

In light of this, it is recommended that efforts of the Worcester Air Quality Action Group are focussed on securing funding to procure the development of a multimodal transport strategy for the City Centre area, which is fully integrated with the wider Worcester Transport Strategy and South Worcestershire Development Plan.

The historic city centre (and its historic approaches) has a finite capacity, which is now being reached on occasion. Promotion of more space-efficient and lower carbon modes of transport (particularly walking and cycling, but also passenger transport and powered two-wheelers) will increase the overall accessibility of the city centre, by optimising the amount of people that can access the area, rather than focussing on the amount of cars.

This long term strategy would set out the approach to the management of accessibility to the City Centre, which should include modal targets, for example:

On a 2014 baseline, seek to reduce overall traffic accessing the City Centre by 30%. This to be achieved through:

- *Parking demand restraint and consolidation of city car parks into fewer, larger facilities*
- *Improvements to pedestrian and cycle routes (signage, information, surfacing and parking facilities) into and through the City Centre*
- *Better use of interurban/strategic rail and bus services, linked to the development of a comprehensive bus priority loop through the city centre to protect buses from traffic congestion.*

## **WORCESTER CITY URBAN AQMA**

### **WRS COMMENTS/UPDATE TO COUNTY TRANSPORT ISSUES DISCUSSION PAPER**

Following completion of the Worcestershire County Council Transport Issues Discussion Paper for Worcester City the WRS Land, Air & Water Quality Team met with Martin Rowe from Worcestershire County Council. At the meeting the proposals made by the County Council were discussed in more detail along with any initial comments and concerns raised by WRS. The meeting provided substantial additional information and allowed a series of focused recommendations to be developed.

An update for each of the priority actions previously outlined by WRS is provided below, along with further discussion of the proposals made by Worcestershire County Council.

#### **New actions identified in WCC Discussion Paper**

WCC recommend the Worcester City Urban AQMA sub group focus on a long term strategy on accessibility to City centre and procure funding for a multimodal transport system which is integrated with the Worcester Transport Strategy and South Worcestershire Development Plan.

It is clear that transport and air quality issues in Worcester City are complex and following discussion with Martin WRS believe that a different approach is required to effectively address poor air quality across the City.

It is evident that the Worcester city centre transport network has a finite capacity and that that capacity is now, on occasion, being reached. The poor air quality issues in Worcester are all traffic related, and as such transport and air quality are intrinsically linked. Without an integrated land use and transport vision for the city centre it will be extremely difficult to develop an effective solution to address existing air quality problems and the transport issues that cause them.

An integrated and holistic Transport Strategy for Worcester City is required. WRS believe that this Strategy should incorporate a Low Emission Strategy for the centre of Worcester City to work in conjunction with transport improvements to deliver both transport and air quality solutions as the two are intrinsically linked. It is envisaged that a Low Emission Strategy will incorporate a package of actions including, but not limited to, the priority actions identified by the WRS Action Plan and cost benefit analysis.

The proposed actions outlined in the County Discussion Paper focus on improving accessibility to Worcester. These actions have been included within the WRS Air Quality Action Plan for Worcestershire in one guise or another and have previously been subject to the cost-benefit analysis process. Whilst WRS support any improvements to walking, cycling and public transport accessibility it is essential that implementation of priority actions which focus on lowering emissions remain high on the agenda. It is unlikely that accessibility improvements alone will achieve the reduction in levels of pollutants required to revoke the AQMAs.

It is acknowledged that the development of an integrated Transport Strategy and Low Emission Strategy for Worcester City is a large and complex undertaking.

The development of such a strategy is in very early stages which WRS believes presents an ideal opportunity to ensure that air quality features significantly in the wider agenda. It is envisaged that the sub-group and WRS can take an active role in the development of any Transport Strategy to support Worcestershire County Council and ensure that air quality issues are addressed.

Recommendation: Sub-group members to actively research detailed case studies of similar locations where integrated transport strategies have been successful. Suggest focus should be on similar cathedral/tourist cities such as York and Winchester. Consider possibility of arranging presentation(s) from those who have successfully delivered such projects and/or visits to relevant areas.

Recommendation: Sub-group members to promote and support an integrated Transport and Low Emission Strategy approach.

### **WRS Air Quality Action Plan priority actions identified for Worcester Urban AQMA update**

#### **Freight Quality Partnership (priority action 5.2.2 Dolday & Lowesmoor)**

Due to recent budget constraints WCC no longer have a freight quality function. WCC have indicated that an update to WCC Lorry Route map may possibly be funded as a project via various economic teams/functions which WRS support. However, WRS believe that further progress in this action, which affects a number of AQMAs across Worcestershire, should be investigated further.

Recommendation: WRS recommend the Steering Group consider formation of a separate sub group potentially including WRS, representation from Freight Trade Associations and interested members may be appropriate to progress this action common to many AQMAs.

### **Improvement of signage to avoid AQMA (priority action 5.1.7 Dolday & Lowesmoor)**

WCC have confirmed that additional/improvement of signage is included as part of the major Southern Link Road improvement program. Additionally, WCC confirm that Variable Messaging Signage (VMS) is to be utilised (temporarily) as part of the switching on of implemented Bus Gate traffic control infrastructure in Lowesmoor.

### **Alteration to traffic light phasing in and around Dolday (priority action DD3 Dolday)**

Signal timings at traffic light junctions around Dolday have recently been altered by Worcestershire County Council. These alterations have resulted in improved flow around the system.

### **Bus Quality Partnership (priority action 5.2.1 Dolday, Lowesmoor, Rainbow Hill)**

Due to recent budget constraints WCC now has extremely reduced involvement in bus service provision and all bus contracts in Worcestershire are purely commercial enterprises. WRS believe this action is crucial to lowering emissions within the City Centre through bus fleet turnover to more emission efficient fuels or engines. This could be either voluntarily through partnership working with the bus companies or via introduction of a Low Emission Zone for buses such has been adopted in Norwich, Oxford and Brighton. WRS recommend this is a key consideration for inclusion within a future Low Emissions Strategy for the City.

#### Next steps

Both WRS and WCC recognise that formation of a Low Emission Strategy integrated into a Transport Strategy for Worcester City Centre will be a significant undertaking. It is proposed that the issues, options and best practice examples are presented by WCC and WRS in order to discuss and develop a plan for strategy at a separate Worcester Urban AQMA's sub group meeting to be arranged in the future.